



Sequence Listing

<110> Ashkenazi, Avi
Baker Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan
Ferrara, Napoleon
Filvaroff, Ellen
Fong, Sherman
Gao, Wei-Qiang
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
Pan, James;
Paoni, Nicholas F.
Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
Tumas, Daniel
Williams, P. Mickey
Wood, William I.

<120> Secreted and Transmembrane Polypeptides and Nucleic
Acids Encoding the Same

<130> P2630P1C62

<140> 10/017191
<141> 2001-10-24

<150> 09/918585
<151> 2001-07-30

<150> 60/062250
<151> 1997-10-17

<150> 60/064249
<151> 1997-11-03

<150> 60/065311
<151> 1997-11-13

<150> 60/066364
<151> 1997-11-21

<150> 60/077450
<151> 1998-03-10

<150> 60/077632

<151> 1993-03-11

<150> 60/077641
<151> 1993-03-11

<150> 60/077649
<151> 1993-03-11

<150> 60/077781
<151> 1993-03-12

<150> 60/078003
<151> 1993-03-13

<150> 60/078866
<151> 1993-03-14

<150> 60/078936
<151> 1993-03-16

<150> 60/078910
<151> 1993-03-16

<150> 60/078433
<151> 1993-03-16

<151> 60/079234
<151> 1993-03-18

<150> 60/079656
<151> 1993-03-16

<150> 60/079664
<151> 1993-03-17

<150> 60/079689
<151> 1993-03-27

<150> 60/079663
<151> 1993-03-27

<150> 60/079718
<151> 1993-03-27

<150> 60/079786
<151> 1993-03-27

<150> 60/079920
<151> 1993-03-30

<150> 60/079923
<151> 1993-03-30

<150> 60/080109
<151> 1993-03-31

<150> 60/080107

<151> 1998-03-31

<150> 60/080165
<151> 1998-03-31

<150> 60/080164
<151> 1998-03-31

<150> 60/080327
<151> 1998-04-01

<150> 60/080328
<151> 1998-04-01

<150> 60/080333
<151> 1998-04-01

<150> 60/080334
<151> 1998-04-01

<150> 60/081078
<151> 1998-04-18

<150> 60/081042
<151> 1998-04-18

<150> 60/081071
<151> 1998-04-18

<150> 60/081120
<151> 1998-04-18

<150> 60/081203
<151> 1998-04-19

<150> 60/081229
<151> 1998-04-19

<150> 60/081955
<151> 1998-04-15

<150> 60/081817
<151> 1998-04-15

<150> 60/081818
<151> 1998-04-15

<150> 60/081912
<151> 1998-04-15

<150> 60/081838
<151> 1998-04-15

<150> 60/082568
<151> 1998-04-11

<150> 60/082569

*151 - 1998-04-21

*150 - 60,082704
*151 - 1998-04-22

*150 - 60,082904
*151 - 1998-04-22

*150 - 60,082700
*151 - 1998-04-22

*150 - 60,082797
*151 - 1998-04-22

*150 - 60,082796
*151 - 1998-04-23

*150 - 60,083336
*151 - 1998-04-27

*150 - 60,083327
*151 - 1998-04-29

*150 - 60,083320
*151 - 1998-04-29

*150 - 60,083495
*151 - 1998-04-29

*150 - 60,083496
*151 - 1998-04-29

*150 - 60,083498
*151 - 1998-04-29

*150 - 60,083641
*151 - 1998-04-29

*150 - 60,082754
*151 - 1998-04-29

*150 - 60,083158
*151 - 1998-04-29

*150 - 60,083754
*151 - 1998-04-29

*150 - 60,083500
*151 - 1998-04-29

*150 - 60,083742
*151 - 1998-04-30

*150 - 60,084366
*151 - 1998-05-02

*150 - 60,084414

<151> 1998-05-06

<150> 607084441
<151> 1998-05-06

<150> 607084637
<151> 1998-05-07

<150> 607084638
<151> 1998-05-07

<150> 607084640
<151> 1998-05-07

<150> 607084696
<151> 1998-05-07

<150> 607084607
<151> 1998-05-07

<151> 607084627
<151> 1998-05-07

<151> 607084643
<151> 1998-05-07

<150> 607085339
<151> 1998-05-13

<150> 607085338
<151> 1998-05-13

<150> 607085313
<151> 1998-05-13

<151> 607085562
<151> 1998-05-15

<150> 607085700
<151> 1998-05-15

<150> 607085689
<151> 1998-05-15

<150> 607085679
<151> 1998-05-15

<150> 607085580
<151> 1998-05-15

<150> 607085573
<151> 1998-05-15

<150> 607085704
<151> 1998-05-15

<150> 607085697

41510 1998-05-15

41500 60/086023

41510 1998-05-18

41500 60/086430

41510 1998-05-22

41500 60/086332

41510 1998-05-22

41500 60/086436

41510 1998-05-22

41500 60/086414

41510 1998-05-22

41500 60/087003

41510 1998-05-28

41500 60/087106

41510 1998-06-08

41500 60/087034

41510 1998-06-08

41500 60/091010

41510 1998-06-26

41500 60/090463

41510 1998-06-26

41500 60/091359

41510 1998-07-01

41500 60/094051

41510 1998-07-20

41500 60/100034

41510 1998-08-11

41500 60/103404

41510 1998-11-20

41500 60/113026

41510 1998-12-22

41500 60/113021

41510 1998-12-22

41500 60/123450

41510 1999-03-17

41500 60/123073

41510 1999-03-29

41500 60/130232

*151 - 1339-04-21

*150 - 60/131022

*151 - 1339-04-26

*150 - 60/131449

*151 - 1339-04-28

*150 - 60/134787

*151 - 1339-05-14

*150 - 60/133557

*151 - 1339-06-16

*151 - 60/141037

*151 - 1339-06-23

*150 - 60/142680

*151 - 1339-07-07

*150 - 60/145698

*151 - 1339-07-16

*150 - 60/146227

*151 - 1339-07-25

*150 - 60/163116

*151 - 1339-10-29

*150 - 09/040229

*151 - 1339-03-17

*150 - 09/105413

*151 - 1339-06-26

*150 - 09/163978

*151 - 1339-10-07

*150 - 09/184216

*151 - 1339-11-02

*150 - 09/187369

*151 - 1339-11-26

*150 - 09/201054

*151 - 1339-11-27

*150 - 09/218513

*151 - 1339-12-27

*150 - 09/234468

*151 - 1339-03-01

*150 - 09/265686

*151 - 1339-03-10

*150 - 09/267215

<151> 1999-03-12

<150> 09/084701

<151> 1999-04-12

<150> 09/311332

<151> 1999-05-14

<150> 09/380137

<151> 1999-05-25

<150> 09/380138

<151> 1999-06-25

<150> 09/380140

<151> 1999-08-25

<150> 09/704234

<151> 2000-11-03

<150> 09/723749

<151> 2000-11-27

<150> 09/747154

<151> 2000-12-27

<150> 09/816744

<151> 2001-03-27

<150> 09/816739

<151> 2001-03-27

<150> 09/854136

<151> 2001-05-17

<150> 09/884138

<151> 2001-05-18

<150> 09/873136

<151> 2001-06-01

<150> 09/874503

<151> 2001-06-05

<150> 09/880036

<151> 2001-06-14

<150> 09/880342

<151> 2001-06-14

<150> PCT/US98/21141

<151> 1998-10-07

<150> PCT/US98/24855

<151> 1998-11-20

<150> PCT/US99/00106

<151> 1993-01-05

<150> PCT/US89/05028

<151> 1999-03-04

<150> PCT/US99/05199

<151> 1999-03-10

<150> PCT/US99/10033

<151> 1999-05-14

<150> PCT/US99/12052

<151> 1999-06-02

<150> PCT/US99/20313

<151> 1999-11-30

<150> PCT/US99/20051

<151> 1999-12-02

<150> PCT/US99/20065

<151> 1999-12-02

<150> PCT/US99/30096

<151> 1999-12-16

<150> PCT/US99/31040

<151> 1999-12-30

<150> PCT/US99/31074

<151> 1999-12-30

<150> PCT/US00/00019

<151> 2000-05-01

<150> PCT/US00/00077

<151> 2000-01-06

<150> PCT/US00/00076

<151> 2000-01-06

<150> PCT/US00/00065

<151> 2000-01-11

<150> PCT/US00/04041

<151> 2000-02-15

<150> PCT/US00/05041

<151> 2000-03-02

<150> PCT/US00/07032

<151> 2000-03-02

<150> PCT/US00/15004

<151> 2000-07-14

<150> PCT/US00/06019

151 2000-03-10

150 PCT/US00/09439

151 2000-03-30

150 PCT/US00/13705

151 2000-05-17

150 PCT/US00/14042

151 2000-05-17

150 PCT/US00/14941

151 2000-05-30

150 PCT/US00/15064

151 2000-06-17

150 PCT/US00/20010

151 2000-07-12

150 PCT/US00/28321

151 2000-08-24

150 PCT/US00/31671

151 2000-10-01

150 PCT/US00/34956

151 2000-12-10

150 PCT/US01/00510

151 2001-02-08

150 PCT/US01/09882

151 2001-03-12

150 PCT/US01/17092

151 2001-05-05

150 PCT/US01/17800

151 2001-06-11

150 PCT/US01/19621

151 2001-06-10

150 PCT/US01/21066

151 2001-06-19

150 PCT/US01/21731

151 2001-07-09

160 6.4

210 1

211 1743

212 LHA

213 Homo sapiens

<400> 1

caagggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatacct 50
ctagagatcc ctgcacctcg acccacgggt ccgccaagct ggccctgcac 100
ggctgcaagg gaggtctctg tggacaggcc aggcaggctg gccctaggag 150
gtgootccag ggggcacgtg ggootgaggo cccagcaagg gctagggtcc 200
atctccagtc ccaggacaca gcagcggcca ccctggccac gccctgggtcc 250
caggagcctc agcagccccc aggcacgggg gaggcacagg tggcccccc 300
caccggagg agcagctcct gccctgtcc gggggatgac tgattctct 350
ccgcacaggcc acccagajja gaaggccacc ccgcctggag gcacaggcca 400
tgaggggctc tcaggaggtg ctgctgatgt ggcttctggt gctggcagt 450
ggcggcacag agcacgccta cgggcacggc cgttaggggt tctgctgtcc 500
cgggtccacg gggacccctg ctccagctcg ttctgtnagc gctgttacc 550
gcccttctcc accacctggc acgggcaccc ggccctgcag accacccgaa 600
ccatttatag gaccgcctac cgggcacggc ctgggtggg ccctggccagg 650
cctcgtacg cgtgctgccc cggctggaag aggcacagcg ggcttctgtg 700
ggcctgttja gcagcaatat gccagccgcc atgcccggaac ggaggagct 750
gtgtccagcc tggccgtctg cgtgccccg caggatggcg gggcgcact 800
tgccagtcc atgtggatga atgcagctc aggcagggcg gctgtcccca 850
gagctgcctc aacaccccg gcagttactg gtgccagtgt tgggaggggc 900
acagcctgtc tgcagacggt acactctgtg tgcccaaggg agggcccccc 950
agggcggccc ccaacccgac aggcgtggac agtcgcatga aggaagaagt 1000
gcagaggctg cagtccaggg tggacctgct ggaggagaag ctgcagcttg 1050
tctcggcccc actgcacagc ctggcctcgc aggcacttga gcctgggtcc 1100
ccggaccccc gcagcctctt ggtgcactcc ctccagcagc tgggcgcct 1150
cgactccctg agcagcaga ttctctctt ggaggagcag ctgggggtct 1200
gctcctgcaa gaaagactcg tgaactgccc gcgcaccagg ctggactgag 1250
ccccccagc cgccttgcaj cccccatgcc cctgcccacc atgctggggg 1300
tcacagaagc accctggggg gactgagcgg aaggccaggc agggccttcc 1350
tcttttct cctccccctt cctcgggagg gtccccagac cctggccttg 1400

gatggggtgg gatttttttt gtgaatccac cctgggtac cccacccctg 145
gttaccacca cggcatccca aggcacaggtg ggcctccagc tgagggaagg 150
taagagttac cctgctggag cctgggaccc atggacagc ccaggcagcc 155
cggaggtctg ggggggctc agtgggggtt gctgctgac cccagcaca 160
ataaaaatga aaagtgaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 165
aaaaaaaaag ggggcggaga cctagagtc gaactgcaga agcttggcgg 170
ccatggcca actgtttat tgcagcttat aatggutaca aat 1743

<110> 2
<110> 295
<110> PST
<110> Homo sapiens

<400> 2
Met Thr Asp Ser Pro Pro Pro Gly His Pro Glu Glu Lys Ala Thr
1 10 11
Pro Pro Gly Gly Thr Gly His Glu Gly Leu Ser Gly Gly Ala Ala
20 25 30
Asp Val Ala Ser Gly Val Gly Ser Gly Arg His Arg Ala Arg Leu
35 40 45
Pro Ala Arg Pro Leu Gly Cys Val Leu Ser Arg Ala His Gly Asp
50 55 60
Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro Phe Leu
65 70 75
Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile
80 85 90
Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
95 100 105
Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu
110 115 120
Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn
125 130 135
Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
140 145 150
Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala
155 160 165
Arg Arg Gly Gly Cys Pro Gln Arg Cys Ile Asn Thr Ala Gly Ser
170 175 180
Tyr Trp Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly

	185	190	195
Thr Leu Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn	201	205	210
Pro Thr Gly Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu	215	220	225
Gln Ser Arg Val Asp Leu Leu Glu Glu Lys Leu Gln Leu Val Leu	230	235	240
Ala Pro Leu His Ser Leu Ala Ser Gln Ala Leu Glu His Gly Leu	245	250	255
Pro Asp Pro Gly Ser Leu Leu Val His Ser Phe Gln Gln Leu Gly	260	265	270
Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe Leu Glu Glu Gln	275	280	285
Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser	290	295	

<211> 3

<211> 21

<211> DNA

<211> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 3

atagagaga atatgcaga c 21

<211> 4

<211> 22

<211> DNA

<211> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 4

ttttccactc ctgtcgggtt gg 22

<211> 5

<211> 46

<211> DNA

<211> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 5

ggtagacatt gccagtcaga tgtggatgaa tgcagtgcata ggaggg 46

<210> 6

4211 - 2945
4212 - DNA
4213 - Homo sapiens

4400 - 6

cgctcgcccc gtagccccc cgcctcccgc agagtcacct cggggcagca 50
gatgtgtgtg gggtagccc acggggggga ctatggtgaa attcccggcg 100
ctcacgcact actggccccc gatccgggtt ttggtagccc tgggcattac 150
caacatagcc atcgacttcg gggagcagga cttgaacggg ggcattgctg 200
ctgtcaagga ggatgcagtc gagatgctgg ccagctacgg gctggcgtag 250
tcctccatga agttcttcac gggtcacctg agtgacttca aaaatgtggg 300
ccctgtgttt gtgaacagca agagagacag gacaaaagcc gtctgtgtta 350
tgggtgttgg aggggcacac gctggcgctt ttacacacct gatagcttat 400
agtgatttag gatactacat tatcaataaa ctgcacctg tggacgagtc 450
ggtaggggagc aagaacagaa gggccttctt gtacctcgcc gccttccctt 500
tcctggagcg aatggcatgg acccatgctg gcattctctt aaaacacaaa 550
tcagttttcc tggtaggatg tgcctcaatc ccagatgtca tagctcaggt 600
tgtttttgta gccattttgc ttcacagtca cctgggaatgc cgggagcccc 650
tgtccatccc gatccctccc ttgtacatgg gcgcacttgt gcgctgcacc 700
acctgtgccc tgggtactca caagaacatt ccagacatca cccctgacag 750
aagtggcccc gagctggggg gagatgcacc aataagaaag atgctgagct 800
ctcggtaggc tttggctcta attctggcca cacagagaat cagtgggctt 850
attgtcaaac tctttgttcc ccgggaacct ggtggcagtt ctgcagccac 900
agaggcagtg gcgattttga cagccacata cctgtgggtt cacatgccat 950
acggctggtt gacggaaatc cgtgctgtgt atcctgcttt cgacaagaat 1000
aaccccagca acaactgggt gagcacgagc aacacagtca cggcagcccc 1050
catcaagaag ttacatttcg ctgcatggg ctgtccactc acgctctgtt 1100
tcgtgatgtt ttggacaccc aactgtcttg agaaaaatct gatagacatc 1150
atcggagtgg actttgcctt tgcagaactc tgtgttgttc ctttgoggat 1200
cttctccttc ttcccagttc cagtcacagt gagggcgcat ctccacgggt 1250
ggctgatgac actgaagaaa accttcgtcc ttgccccag ctctgtgtgtg 1300

aggatcateg tcttcatego cagcctcgtg gtctacccct acctgggggt 1350
gcaoggtgag acctgggggag tgggctccct cctggggggg tctgtgggag 1400
aatccaccat ggttcggcato gctgctgct atgtctacgg gaagcagaaa 1450
aagaagatgg agaattgagtc ggccacggag ggggaagact ctgccatgac 1500
agacatgctt ccgacagagg aggtgacaga catctgtgaa atgagagagg 1550
agaatgaata aggcacggga cggcatggg actgcaggga cggtcagtca 1600
ggatgacact tgggcacat ctcttccttc tcccatctta ttttgttccc 1650
ttttttttgt tttgttttgg taatgaaaga ggccttgatt taaaggcttc 1700
gtgtcaatto tctagcatac tgggtatgct caccctgacg gggggaccta 1750
gtgaatggtt tttactgttg ctatgtaaaa acaaacgaaa caactgactt 1800
cataccctg cctcacgaaa accaaaaaga cacagctgcc tcaaggcttg 1850
cgttgtgttc cctccctctg gacaattctt tcttggaacc aaaggactgc 1900
agctgtgcca tgggctctcg gtcaccctgc acagcaggcc acagactctt 1950
ctgtccctct ccatcgctct taagaatcaa cagggttaaaa ctgggcttcc 2000
tttgatttgc ttcacagtc catggcctga caaagagatg gagccctggg 2050
ggcctcttaa atttccttc tgcacaggag ttcgaaacca tctactccac 2100
acatgcagga ggggggtgg acctgcagc cgggagtccc cgttcacact 2150
gaggaaaggga gacctgtgac cacagcagga tgacagatgg acagaatctt 2200
ccgtagaaaag gtttgggttg aaatgcctcg ggggcagcaa actgacatgg 2250
ttgaatgata gcatttcact ctgggttctt ctagatctga gcaagctgtt 2300
agttctcacc cccacgtgtt atatacatga gctaaatttt tcaaatgttc 2350
acaaaagcgc atctccagat tccagaccct gcccacgac ttttcctgaa 2400
ggcttgcttt tccctcgctt ttcctgaagg tgcattaga gcgagtccac 2450
tggagcctcc taactttgca ttttagtttt cacagtgaac tgaagcttta 2500
agtctcctcc agcattctaa tgcaggttg ctgtagggtt acttttgaa 2550
tagatatatt acctggctct gctatcttta gtcataaact tggggtacag 2600
gtaattgaga atgtactacg gtacttcctt cccacacat acgataaagg 2650
aagacatttt ataacgatac cagagtcact atgtggtcct cctgaaaata 2700
acgcatttga aatccatgca gtgcagtata tttttctaag ttttggaaa 2750

caggtttttt cctttaaaaa aattatagac acgggttcact aaattgattt 2800
 agtcagaatt cctagactga aagaacctaa acaaaaaaat attttaaaga 2850
 ctataatata tgcctgtatat gttatgtaat ttatttttagg ctataataca 2900
 ttctctattt tgcctatttc aataaaatgt ctctaataca aaaaa 2945

<210> 7
 <211> 492
 <212> PRT
 <213> Homo sapiens

<214> 7
 Met Val Lys Phe Pro Ala Leu Thr His Tyr Trp Pro Leu Ile Arg
 1 5 10 15
 Phe Leu Val Pro Leu Gly Ile Thr Asn Ile Ala Ile Asp Phe Gly
 20 25 30
 Glu Gln Ala Leu Asn Arg Gly Ile Ala Ala Val Lys Glu Asp Ala
 35 40 45
 Val Glu Met Leu Ala Ser Tyr Gly Leu Ala Tyr Ser Leu Met Lys
 50 55 60
 Phe Phe Thr Gly Pro Met Ser Asp Phe Lys Asn Val Gly Leu Val
 65 70 75
 Phe Val Asn Ser Lys Arg Asp Arg Thr Lys Ala Val Leu Cys Met
 80 85 90
 Val Val Ala Gly Ala Ile Ala Ala Val Phe His Thr Leu Ile Ala
 95 100 105
 Tyr Ser Asp Leu Gly Tyr Tyr Ile Ile Asn Lys Leu His His Val
 110 115 120
 Asp Glu Ser Val Gly Ser Lys Thr Arg Arg Ala Phe Leu Tyr Leu
 125 130 135
 Ala Ala Phe Pro Phe Met Asp Ala Met Ala Trp Thr His Ala Gly
 140 145 150
 Ile Leu Leu Lys His Lys Tyr Ser Phe Leu Val Gly Cys Ala Ser
 155 160 165
 Ile Ser Asp Val Ile Ala Gln Val Val Phe Val Ala Ile Leu Leu
 170 175 180
 His Ser His Leu Glu Cys Arg Glu Pro Leu Leu Ile Pro Ile Leu
 185 190 195
 Ser Leu Tyr Met Gly Ala Leu Val Arg Cys Thr Thr Leu Cys Leu
 200 205 210

Gly Tyr Tyr Lys	Asn Ile His Asp Ile	Ile Pro Asp Arg Ser	Gly
	315	320	325
Pro Glu Leu Gly	Gly Asp Ala Thr Ile	Arg Lys Met Leu Ser	Phe
	330	335	340
Trp Trp Pro Leu	Ala Leu Ile Leu Ala	Thr Gln Arg Ile Ser	Arg
	345	350	355
Pro Ile Val Asn	Leu Phe Val Ser Arg	Asp Leu Gly Gly Ser	Ser
	360	365	370
Ala Ala Thr Glu	Ala Val Ala Ile Leu	Thr Ala Thr Tyr Pro	Val
	375	380	385
Gly His Met Pro	Tyr Gly Trp Leu Thr	Glu Ile Arg Ala Val	Tyr
	390	395	400
Pro Ala Phe Asp	Lys Asn Asn Pro Ser	Asn Lys Leu Val Ser	Thr
	405	410	415
Ser Asn Thr Val	Thr Ala Ala His Ile	Lys Lys Phe Thr Phe	Val
	420	425	430
Cys Met Ala Leu	Ser Leu Thr Leu Cys	Phe Val Met Phe Trp	Thr
	435	440	445
Pro Asn Val Ser	Glu Lys Ile Leu Ile	Asp Ile Ile Gly Val	Asp
	450	455	460
Phe Ala Phe Ala	Glu Leu Cys Val Val	Pro Leu Arg Ile Phe	Ser
	465	470	475
Phe Phe Pro Val	Pro Val Thr Val Arg	Ala His Leu Thr Gly	Trp
	480	485	490
Leu Met Thr Leu	Lys Lys Thr Phe Val	Leu Ala Pro Ser Ser	Val
	495	500	505
Leu Arg Ile Ile	Val Leu Ile Ala Ser	Leu Val Val Leu Pro	Tyr
	510	515	520
Leu Gly Val His	Gly Ala Thr Leu Gly	Val Gly Ser Leu Leu	Ala
	525	530	535
Gly Phe Val Gly	Glu Ser Thr Met Val	Ala Ile Ala Ala Cys	Tyr
	540	545	550
Val Tyr Arg Lys	Gln Lys Lys Lys Met	Glu Asn Glu Ser Ala	Thr
	555	560	565
Glu Gly Glu Asp	Ser Ala Met Thr Asp	Met Pro Pro Thr Glu	Glu
	570	575	580
Val Thr Asp Ile	Val Glu Met Arg Glu	Glu Asn Glu	
	585	590	

<210> 8
<211> 385
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 33, 66, 96, 387
<223> unknown base

<400> 8
ccttaccagaa gtgcaccgga gctgggggag atncaacatt aagaagatgc 50
tgaajctctg gtgccttttg gctctaatto tggccacaca gagaancagt 100
cggccctctg tcaacctctt tgtttcccgg gaccttgggtg gcagttctgc 150
acccacagag gcagtgggga ttttgacaga cacataccct gtgggtcaca 200
tgcctatcgg ctggttgacg gaaatccgtg ctgtgtatcc tgccttcgac 250
aagaataacc ccagcaacaa actgggtgagc acgagcaaca cagtcacggc 300
cgctccacac aagaagttca ccttcgtctg catggctctg tcactcagc 350
ctcgttcagt gatgttttg acacccaaag tgcctgngaa aatcttgata 400
gacatctctg gactggactt tgcctttgca gaactctgtg ttgttccttc 450
ccgcatcttc cctttctctc cagttccagt cacagtgagg gcgcatctca 500
cccgctggct gatgacaact aagaaaacct tgcgc 535

<210> 9
<211> 434
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 328, 273,
243, 296, 305, 336, 353, 361
<223> unknown base

<400> 9
tgaagggaac ccgggctggg tatctgggtt tngacaagat aaacccccag 50
caanaaattg gggagccagg caaaacagtn acgggcagcc cacatcaaga 100
agttcacctt ngtttgnatg gntctgtcaa ctacgcctt gtttcgtgat 150
gttttggaca cccaaagtgt ttgagaaaat ttgatagac atnatcggag 200
tggantctg ctttgcagaa ntttgnctg ttctttggg gattttctcc 250
tttttccag ttccagtcac agngagggcg catctcaccg gnggntgat 300

gicantgaag aaaaacatttg tccctgcccc cagctntttg gtgaggatca 350
ctgtccatnat ncccagccctt gtggctctac cctacctggg ggtgcacggg 400
ggagaccctgg gctgtgggttc cctcctgggg ggca 434

<210> 10
<211> 154
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 33, 49, 63, 83, 90, 93, 119
<223> unknown base

<400> 10
tattccacagt tccggctacg gggagggggc atntcacagg gtggtgag 50
aaactgaaga aaacatttngt ccttgccccc agntttgtgn tggggatnat 100
cgtccctcctc gccagctctg tggctctacc ctacctgggg gtgcacgggtg 150
area 154

<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 11
cagatccggg tcttggtgac cctg 24

<210> 12
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 12
gctctgtcac tcacgctc 18

<210> 13
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 13
tcattctctt cctctccc 18

<211> 14
<211> 13
<211> DNA
<211> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 14
ccctccgccg cggagttc 18

<211> 15
<211> 24
<211> DNA
<211> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 15
ggcgaactcc actccgatga tgtc 24

<211> 16
<211> 24
<211> DNA
<211> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
gactggctgtg gtcacaggta tccg 24

<211> 17
<211> 45
<211> DNA
<211> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcggggagca ggccttgaac cggggcattg ctgctgtcaa ggagg 45

<211> 18
<211> 1901
<211> DNA
<211> Homo sapiens

<400> 18
gcccgcgcgc cgggcgcggg cgcgcgaagc cgggagccac cgcctgggg 50
gactgcctgg gaggctgctc cctgctcagc tgcgcgtcct gcctctggcg 100
ctctgcctcc tgcctctgt gcagctgctg cccgcgcagc cgcactcca 150

ccgtgagccg cctcatcttc acgttcttcc tcttcctggg ggtgctggtg 200
 tccatcatta tgcctgagccc gggcgtggag agtcagctct acaagctgcc 250
 ctgggtgtgt gaggaggggg ccgggatccc caccgtctg cagggccaca 300
 ccgactgtgt ctccctgctt ggctaccccg ctgtctaccg catgtgcttc 350
 gccacggggg ccttcttctt ctctcttttc acctgctca tgcctgggt 400
 gacgagcagc cgggaccccc gggctggcat ccagaatggg tcttggtctt 450
 ctaagttccg gatccctggg ggctccaccg tgggtgcctt ctacatccct 500
 gacggctccg ccaccaacat ctgggtctac ccggggtcg tgggtctctt 550
 cctcttcctc ctcatccagc tgggtgctgt catcgactt gccactctt 600
 ggaaccagcg gtggctgggc aaggccgagg agtgcgattc ccgtgcctgg 650
 taccgagggc tcttcttctt cactctcttc tctacttgc tctcgatcgc 700
 ggccgtggcg ctgatgttca tgtactacac cgagccagc ggtgcacag 750
 agggcaaggt ctccatcagc cccaacctca cctctgtgt ctgctgtctc 800
 atcgtgctg tctgcccc agtccaggac gccagccca actcgggtct 850
 gctgcaggcc ccgtccatca cctctacac catgtctgt acctggtcag 900
 ccttatccag tatccctgaa cagaaatgca acccccattt gccaacccag 950
 ctgggcaacg agacagttgt ggcaggcccc gagggctat gagccagtg 1000
 gtgggatgcc ccgagcattg tgggcctcat catctcttc ctgtgcaacc 1050
 ccttcacag cctgcgctcc ccagaccacc ggcagggtgaa cagcctgatg 1100
 cagaccgagg agtgccacc tatgctagac gccacacagc agcagcagca 1150
 gcaggtggca gctgtgagg gccgggcctt tgacaacgag caggacggcg 1200
 tcaactacg ctactcttc tccactctt gctgggtgt ggcctcactg 1250
 cactcatga tgacgtccac caactggtaa aagcccggtg agaccgggaa 1300
 gatgatcagc acgtggacc ccgtgtgggt gaagatctgt gccagctggg 1350
 cagggctgt cctctactg tggacctgg tagcccaact cctcctggcg 1400
 aacccgact ccagctgagg cagcctcaca gctgcacac tgggtgcctc 1450
 tggcacctg tgcctctcg ctgggtgaca gccaacctgc cccctcccca 1500
 caccaatcag ccaggctgag cccccacccc tggccagct ccaggacctg 1550
 cccctgagcc gggccttcta gtctagtgc ctccaggctc ccaggagcat 1600

cagggtccttg cagagcccca tccccccggc acacccacac ggtggagctg 1650
 cctcttcctt cccctctctc ctgttgccca tactcagcat ctgggatgaa 1700
 agggctccct tgtctcagg ctccacggga ggggggctgc tggagagaga 1750
 ggggaactcc caccacagtg gggcctccgg cactgaagcc ctgggtgttc 1800
 tggtaagtc ccccagggga cctggccccc ctctgggact tctgtcctta 1850
 ctgagtctct aagacttttt ctaataaaca agccagtggg tgtaaaaaaa 1900
 a 1901

<Q110> 19
 <Q111> 457
 <Q112> PRT
 <Q113> Homo sapiens

<G000> 19
 Met Gly Ala Cys Leu Gly Ala Cys Ser Leu Leu Ser Cys Ala Ser
 1 5 10 15
 Cys Leu Cys Gly Ser Ala Pro Cys Ile Leu Cys Ser Cys Cys Pro
 20 25 30
 Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe
 35 40 45
 Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly
 50 55 60
 Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly
 65 70 75
 Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser
 80 85 90
 Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala
 95 100 105
 Ala Phe Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser
 110 115 120
 Ser Ser Arg Asp Pro Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe
 125 130 135
 Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr
 140 145 150
 Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val
 155 160 165
 Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Leu Val Leu Leu Ile
 170 175 180

4210> 20
4211> 24
4212> DNA
4213> Artificial Sequence

4221>
4222> Synthetic oligonucleotide probe

4400> 20
gagagatcat attcacgttc ttcc 24

4210> 21
4211> 20
4212> DNA
4213> Artificial Sequence

4221>
4222> Synthetic oligonucleotide probe

4400> 21
taatcagct ggtgctgctc 20

4210> 22
4211> 21
4212> DNA
4213> Artificial Sequence

4221>
4222> Synthetic oligonucleotide probe

4400> 21
attcttccac ttctgctgg 20

4210> 23
4211> 16
4212> DNA
4213> Artificial Sequence

4221>
4222> Synthetic oligonucleotide probe

4400> 18
ctctgggcacaa aatgcaac 18

4210> 14
4211> 14
4212> DNA
4213> Artificial Sequence

4221>
4222> Synthetic oligonucleotide probe

4400> 24
cagcaatgta gaaggcacc accg 24

4210> 25
4211> 24

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 15

tggaagagat attcaaccac aagg 24

<210> 26

<211> 50

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 26

gttccatcat tatgtgagc cggggcgtgg agagtcagct ctacaagctg 50

<210> 27

<211> 1351

<212> DNA

<213> Homo sapiens

<400> 27

gagcaggccc ggggaactgaa ggtgtggtg tagagccctc tggcagaggg 50

ttaacctggg tcaaatgcac ggattctcac ctgtacagt taagctctcc 100

cggggcaagt ccgagaggac ttgaagtccg gagcgctcaa gtttgcctgt 150

aggctgagag aaggccatgg agtgccggc acgggcacgg cggagcttcc 200

tctgtagagc attgtgccta tttcccagag cctttgtgtg cgaagctgtg 250

actgcagatt cgggaagtcc tgaggagcgt cagaagcggc ttcctacgt 300

cccagagccc tattaccggg aatctggat ggaccgcctc cgggagctgt 350

tggcraaga tgaacagcag agaatttcaa aggaacctgc caatatctgt 400

aagacggcag ctacagcagg catcattggc tgggtgtatg ggggaatacc 450

agcttttatt catgctaaac aacaatacat tgagcagagc caggcagaaa 500

tttatcataa ccggtttgat gctgtgcaat ctgcacatcg tgotgcacac 550

cagagcttca ttogttatgg ctggcgctgg ggttggagaa ctgcagtgtt 600

tgtgactata ttcaacacag tgaacactag tctgaatgta taccgaaata 650

aagatgcctt aagccatttt gtaattgcag gagctgtcac gggaagtctt 700

tttaggataa acgtaggcct gctgtggcctg gtggctgggt gcataattgg 750

agccttgctg ggcactcctg taggaggcct gctgatggca tttcagaagt 800

acgctgggtga gactgttcag gaaagaaaaac agaaggatcg aaaggpactc 850
 catgagctaa aactggaaga gtggaaagga agactacaag ttactgagca 900
 cctccctgag aaaattgaaa gtagtittacg ggaagatgaa cctgagaatg 950
 atgctaagaa aattgaagca ctgctaaaac ttctagaaa cctttcagta 1000
 atagataaac aagacaagga ctgaaagtgc totgaacttg aaactcactg 1050
 gagagctgaa gggagctgac atgtccgatg aatgccaaca gacagggcac 1100
 cctttgggtca gctgctgac aaatttaagt gctggtacct gtggtggcag 1150
 tggcttgctc ttgtctttt cttttctttt taactaagaa tgggggtgtt 1200
 gtaactctac ttactctac cttaaattta aatactact tatgtttgta 1250
 ttaattctac aatatatgca tacatggata tatccacca cctagatttt 1300
 aagcagtaaa taaaacattt cgcaaaagat taaagtggaa ttttacagtt 1350
 t 1351

<210> 23
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 23
 Met Glu Val Pro Pro Pro Ala Pro Arg Ser Phe Leu Cys Arg Ala
 1 5 10 15
 Leu Cys Leu Phe Pro Arg Val Phe Ala Ala Glu Ala Val Thr Ala
 20 25 30
 Asp Ser Glu Val Leu Glu Glu Arg Gln Lys Arg Leu Pro Tyr Val
 35 40 45
 Pro Glu Pro Tyr Tyr Pro Glu Ser Gly Trp Asp Arg Leu Arg Glu
 50 55 60
 Leu Phe Gly Lys Asp Glu Gln Gln Arg Ile Ser Lys Asp Leu Ala
 65 70 75
 Asn Ile Cys Lys Thr Ala Ala Thr Ala Gly Ile Ile Gly Trp Val
 80 85 90
 Tyr Gly Gly Ile Pro Ala Phe Ile His Ala Lys Gln Gln Tyr Ile
 95 100 105
 Glu Gln Ser Gln Ala Glu Ile Tyr His Asn Arg Phe Asp Ala Val
 110 115 120
 Gln Ser Ala His Arg Ala Ala Thr Arg Gly Phe Ile Arg Tyr Gly
 125 130 135

Trp	Arg	Trp	Gly	Trp	Arg	Thr	Ala	Val	Phe	Val	Thr	Ile	Phe	Asn	
				140					145					150	
Thr	Val	Asn	Thr	Ser	Leu	Asn	Val	Tyr	Arg	Asn	Lys	Asp	Ala	Leu	
				155					160					165	
Ser	His	Phe	Val	Ile	Ala	Gly	Ala	Val	Thr	Gly	Ser	Leu	Phe	Arg	
				170					175					180	
Ile	Asn	Val	Gly	Leu	Arg	Gly	Leu	Val	Ala	Gly	Gly	Ile	Ile	Gly	
				185					190					195	
Ala	Leu	Leu	Gly	Thr	Pro	Val	Gly	Gly	Leu	Leu	Met	Ala	Phe	Gln	
				200					205					210	
Lys	Tyr	Ala	Gly	Glu	Thr	Val	Gln	Glu	Arg	Lys	Gln	Lys	Asp	Arg	
				215					220					225	
Lys	Ala	Leu	His	Glu	Leu	Lys	Leu	Glu	Gln	Trp	Lys	Gly	Arg	Leu	
				230					235					240	
Gln	Val	Thr	Glu	His	Leu	Pro	Glu	Lys	Ile	Glu	Ser	Ser	Leu	Arg	
				245					250					255	
Glu	Asp	Glu	Pro	Glu	Asn	Asp	Ala	Lys	Lys	Ile	Glu	Ala	Leu	Leu	
				260					265					270	
Asn	Leu	Pro	Arg	Asn	Pro	Ser	Val	Ile	Asp	Lys	Gln	Asp	Lys	Asp	
				275					280					285	

<210> 29
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 29
 gggaagtcac ttgaggagcg tcagaagcgg ctccactacg tccagagac 50
 atattaacg gaatctggat gggacgcctc cgggagctgt ttggcaaaga 100
 tgaacagcag agaatttcac aggaacttgc taatatctgt aagaaggcag 150
 ctatagcagg catcattggc tgggtgtatg ggggaataac agcttttatt 200
 catgctcaac aacaatacat tgagcagagc caggcagaaa ttatcataa 250
 cccctttgat gctgtgcaat ctgcacatcg tctgtgcaca cgaggcttca 300
 ttctttatg gctggcgccg aacc 324

<210> 31
 <211> 317
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 262, 330, 371
<223> unknown base

<400> 30
tcaagtttgt ccgtaggtag agagaaggcc atggaggtgc cgcacccggc 50
accgcgriags tttttttctgt agagcattgt gctattttcc ccgagttttt 100
gtcgcgcgaag ctgtgactgc cgattcggaa gtcccttgagg agcgtcagaa 150
cgggcttccc taagtccag agccctatta cccggaattt ggatgggacc 200
gcctcccgga gctgtttggc aaagatgaac agcagagaat ttcaaaggac 250
cttgcgtata tntgtaagac ggcagctaca gcaggcatca ttggctgggt 300
ctatggggga ataccagctt ctattcatgn taaacaacaa tacattgagc 350
agagccaggc agaaatttat nataacc 377

<210> 31
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 31
tgcctacgtt acgtctccc 20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 31
cttcagcagc gtcagaagcg 20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 30
ataacgcatg aagcctcgtg 20

<210> 34
<211> 40
<212> DNA

<113> Artificial Sequence

<120>

<125> Synthetic oligonucleotide probe

<400> 34

ataaatatct gtaagacggc agtacagca ggcacattg 40

<110> 35

<111> 1419

<112> DNA

<113> Homo sapiens

<400> 35

gagcgcgcgc cgcgcgcgcgc ccgcgcactg cagcccagg ccccggcgcc 50
ccacccacgt ctgcgttgcg gccccgcctg ggcacggccc caaaggcaag 100
gacaaagcag ctgtcagggc acctccgcgc gactcgaatt tacgtgcagc 150
tgcgggcacg cacaggttcc aagatggttt gggggggctt cgcgtgttcc 200
aagcaactgc tgcgcgcctc caacctgctt cacacctgg ttagtctgct 250
gtcaattgga attgctgcgc ggggcattgg ctccgggctg attccagtc 300
tcgcagtcgt cggcgttggtc attgcagtcg gcattctctt gttcctgatt 350
gttttagtcg gtctgattgg agctgtaaaa catcatcagg tcttgctatt 400
tttttatatg attattctgt tactctgatt tattgttcag tttctctgat 450
cttcgccttg tttagccctg aaccaggagc aacagggtca gcttctggag 500
gttcgttcga acaatacggc aagtgcctga aatgacatc agagaaatct 550
aaaactgctg gggctccgaa gtgttaaccc aaatgacacc tgtctggcta 600
gtctgtttca aagtgaaccg tcgtgcctgc catgtgctcc aatcatagga 650
gaatatgcgc gagaggcttc gagatttgtt ggtgggcatt gctgtctctt 700
cagttctaca gagatcctgg gtgtttggct gacctacaga tacagggaac 750
agaaagaccc ccgcgcgaat cctagtcgat tcctttgatg agaaaaaacg 800
caagatttcc ttcgtatta tgatcttgtt cactttctgt aattttctgt 850
taagctccat ttgcacgttt aagggaaggaa acactatctg gaaaagtaac 900
ttattgatag tggaattata ttttttact ctatgtttct ctacatgttt 950
ttttttttcc gttgcgaaa aatatttgaa acttggtgct tcctgaagctc 1000
cgtggcacct ggaatttact gtattcatg tcgggcactg tccactgtg 1050
cctttcttag catttttacc tgcagaaaaa ctttgtatg taccactgtg 1100

ttggttatat ggtgaatctg aacgtacatc tcaactggtat aattatatgt 1150
 agcactgtgc tgtgtagata gtctctactg gaaaaagagt ggaaatttat 1200
 taamatcaga aagtatgaga tctgtttatg ttaagggaaa tccaaattcc 1250
 caattttttt tgggtttttt aggaagatt gttgtggtta aaagtgttag 1300
 tatcaaatg ataatttact tgtagtcttt tatgattaca ccaatgtatt 1350
 ctagaatatg tcatgtctta ggaaattgtg gttaattttt tgaattttac 1400
 aggttaagtgc aaaggagaag tgggttcatg aaatgtctta atgtataata 1450
 acattttact tcaagctcca tcagaatgga acgagtcttg agtaatcagg 1500
 aagtatatct atatgatctt gatattgttt cataaataatt tgaagtctaa 1550
 aagactgcat ttttaacaaa gttagtatta atgggttgga ccacgtagca 1600
 aaaagatatt tgattatctt aaaaattggt aaataacggt ttcatgaaat 1650
 ttctcagtat tgtaacagca aattgtcaaa cctaagcata ttggaatatg 1700
 atctccata atttgaattt gaaatcgtat tgtgtggctc tgcataattct 1750
 gttaaaaaat taaaggacag aaactctctt ttgtgtatgc atgtttgaat 1800
 taaaagaaag taatggaag 1819

<210> 36
 <211> 204
 <212> PRT
 <213> Homo sapiens

<100> 36
 Met Val Cys Gly Gly Phe Ala Cys Ser Lys Asn Cys Leu Cys Ala
 1 5 10 15
 Leu Asn Leu Leu Tyr Thr Leu Val Ser Leu Leu Leu Ile Gly Ile
 20 25 30
 Ala Ala Trp Gly Ile Gly Phe Gly Leu Ile Ser Ser Leu Arg Val
 35 40 45
 Val Gly Val Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala
 50 55 60
 Leu Val Gly Leu Ile Gly Ala Val Lys His His Gln Val Leu Leu
 65 70 75
 Phe Phe Tyr Met Ile Ile Leu Leu Leu Val Phe Ile Val Gln Phe
 80 85 90
 Ser Val Ser Cys Ala Cys Leu Ala Leu Asn Gln Glu Gln Gln Gly
 95 100 105

Gln	Leu	Leu	Glu	Val	Gly	Trp	Asn	Asn	Thr	Ala	Ser	Ala	Arg	Asn
				110					115					120
Asp	Ile	Gln	Arg	Asn	Leu	Asn	Cys	Cys	Gly	Phe	Arg	Ser	Val	Asn
				125					130					135
Pro	Asn	Asp	Thr	Cys	Leu	Ala	Ser	Cys	Val	Lys	Ser	Asp	His	Ser
				140					145					150
Cys	Ser	Pro	Cys	Ala	Pro	Ile	Ile	Gly	Glu	Tyr	Ala	Gly	Glu	Val
				155					160					165
Leu	Arg	Phe	Val	Gly	Gly	Ile	Gly	Leu	Phe	Phe	Ser	Phe	Thr	Glu
				170					175					180
Ile	Leu	Gly	Val	Trp	Leu	Thr	Tyr	Arg	Tyr	Arg	Asn	Gln	Lys	Asp
				185					190					195
Pro	Arg	Ala	Asn	Pro	Ser	Ala	Phe	Leu						
				200										

<110> 37
 <111> 390
 <112> DNA
 <113> Homo sapiens

<110>
 <111> unsure
 <112> 20, 35, 61, 83, 106, 130, 133, 137, 232, 260, 336
 <113> unknown base

<400> 37
 tgaatggagc tgtaaaaaan tcttcaggtg ttgttatttt tttatatgat 50
 tattctgtaa ntgtatttta ttgttcagtt ttntgtatct tgcgcttggt 100
 taghontgaa ccaggagcaa cagggtcagn ttntggaggt tggttggaac 150
 aataaggcaa gtgctcgaaa tgacatccag agaaatntaa actgctgtgg 200
 gttccgaagt gtaaccccaa atgacacctg tntggctagc tgtgtcaaaa 250
 gtgacccactn gtgctcgcaa tgtgctccaa tcataggaga atatgctgga 300
 taggttttga gatttgggtg tggcattggc ctgttnttca gttttacaga 350
 gatccctgggt gtttggctga cctacagata caggaaccag 390

<210> 38
 <211> 396
 <212> DNA
 <213> Homo sapiens

<210>
 <211> unsure
 <212> 27

<223> unknown base

<400> 38

aatccaaaat tcccgaattt ttttggncctt tttagggaaa gatgtgttgt 50
agtaaaaaagt gttagtataa aaatgataat ttactgttag ttttttatga 100
ttataccaat gtattctaga atagttaatgt tttaggaaat tgttggtttaa 150
tttttgactt ttacaggtaa gtgcgaagga gaagtgggtt catgaaatgt 200
tttaattgtat aataacattt accttcagcc tcccatcaga atggaacgag 250
ttttgagtaa tccaggaagt atatctatat gatcttgata ttgttttata 300
ttatttgaag tctaaaagac tgcattttta aacaagttag tattaatgag 350
ttgtcccaag tagcaaaaag atatttgatt atcttaaaaa ttgtcaata 400
tggtttccat gaaagtctc agtattgtaa cagcaacttg tcaaacctaa 450
gcatatttga atatgatctc ccataatttg aaattgaaat cgtatttgtt 500
gtatgaaatg gcaatcttat gtgtgttgaa ggacacagta agagcaccaa 550
gtttgccc acctgc 566

<219> 39

<211> 264

<212> DNA

<213> Homo sapiens

<219>

<211> unsure

<212> 84-85, 206

<213> unknown base

<400> 39

atgattatct tggtaactgt atttattgtt cagttctatg gtatcttgag 50
ctgtgtttagc ccttgaaacc aggagcaaca gggncagct ccttgagagt 100
tggttggcaa caatcacggc caagtgactc cgcgaatgac atcccagaga 150
aatccataaac tggctgtgggt tccgaagtgt taacccaaat gacacctgtc 200
tggctngctg tgttaaaagt gaccactcgt gctcgcctat tgcaccaatc 250
ataagagaat atgc 264

<219> 40

<211> 21

<212> DNA

<213> Artificial Sequence

<200>

<223> Synthetic oligonucleotide probe

<400> 40
aaatactct gcggttgctgc c 21

<210> 41
<211> 1:
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 41
atgaatatgc tggagagg 18

<210> 42
<211> 24
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 41
aggaatgcac taggattgcg gggg 24

<210> 43
<211> 45
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 43
gagccccaaag gcaaggacaa agcagctgtc agggaacctc ggcgg 45

<210> 44
<211> 2061
<212> DNA
<213> Homo sapiens

<400> 44
caagtcacacat gaagctggggc tgtgtcctca tggcctgggc cctctacatt 50
tcccttggtg tgctctgggt ggcccagatg ctactggctg ccagttttga 100
gacgtctcag tgtgagggac ctgtctgcac tgaggagagc agctgccaca 150
aggaggatga ctgactgat gcaagggaag ctggcttcca ggtcaaggcc 200
tactcttcca gtgaacctt ccacctgatt gtgtcctatg actggctgat 250
ctctcaaggt ccagccaagc cagtttttga aggggacctg ctggtttctgc 300
gctgccaggc ctggcaagac tggccactga ctcaggtgac cttctaccca 350

gatggctcag ctctgggtcc ccccggggctt aacagggaat tctccatcac 400
cgtgggtacaa aagggcagaca gggggcacta ccactgcagt ggcattctcc 450
agagccctgg tctggggato ccagaaaacag catctgttgt ggctaccaca 500
gtccaagaac tgtttccago gccaatcttc agagctgtac cctcagctga 550
accccaagca ggaagcccca tgacccctgag ttgtcagaca aagttgcccc 600
tgcagagggtc agctgccccg cctctctctt cctctacaa ggatggaagg 650
atagtgcata gcaggggggt cctctcagaa ttccagatcc ccacagcttc 700
agaagatcac tccgggtcat actgggtgtga ggcagccact gaggacaacc 750
aagtttgga aacagagcccc cagctcagaga ccagagtcca gggtgcttcc 800
agctctgtg caactccac attgaatcca gctctcaga aatcagctgc 850
tccaggaaat gctctcagg aggcctctgg gctctgctt cggccgcccc 900
cccatcttc tgaggatcca ggctctctct cctctctggg gatgcagat 950
cctcatctgt accaccagat gggcctctct cccaaacaca tgcaggatgt 1000
gagagtcttc ctgggtcac tgcctatgga gttgagggaa ctatctggcc 1050
accagaagcc tgggaacaca aaggctactg ctgaatagaa gtaaacagtt 1100
catccatgat cctacttaac caccccaata aatctgatto ctctctctt 1150
ctctctgtcc tgcacatct cataagtact cctacaagtt gtcccagtt 1200
cttcttagaa taatgtagtt aggtcagttt aaataaatct atataaagt 1250
agaattagag tttagctata attgtgtatt ctctcttaac accacagaat 1300
ctctctgct agatcaggaa ttctctctt ctatctcag ccagaatgtt 1350
tgatttaaa agaaactaat gaagtggatt gaatcacga gtctcaact 1400
ggggcaattt tggcccccag aggcatttgg gcaatgttt gagacattt 1450
ggtoattata ctgggggggt tgggggatgg tgggatgtgt gtctactggc 1500
atccagttaa tagaagccag gggcgccgt aaacatctta taatgcacag 1550
ggcagtaccc cacaacgaaa aataatctgg cccaaaatgt cagttgtact 1600
gagtttgaga aaccccagcc taatgaaacc ctaggtgttg ggctctggaa 1650
tgggaatttg cctctctaa ctattatct tttccagct cattcagct 1700
ttcttaactga cataccagtc attagctggg gctatggct gttctctagt 1750
cttagtttgt atccctcaa aagccattat gttgaaatcc taatcccaa 1800

agtqatggca ttaagaagtg ggcctttggg aagtgallag atcaggagtg 1250
 gagagccctc atgattagga ttagtgccct tatttaaaaa ggcccagag 1300
 agctaactca cccctccacc atatgaggac gtggcaagaa gatgacatgt 1350
 atgagaacca aaaaaacagct gtgcgcaaac accgactctg tcgttgccct 2000
 tatcttgaac ttccagccct cagaactatg agaaataaaa tcttggttgt 2050
 atgtagccca a 2061

<210> 45
 <211> 359
 <212> PRT
 <213> Homo sapiens

<400> 45
 Met Lys Leu Gly Cys Val Leu Met Ala Trp Ala Leu Tyr Leu Ser
 1 5 10 15
 Leu Gly Val Leu Trp Val Ala Gln Met Leu Leu Ala Ala Ser Phe
 20 25 30
 Gln Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser
 35 40 45
 Cys His Thr Glu Asp Asp Leu Phe Asp Ala Arg Glu Ala Gly Phe
 50 55 60
 Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val
 65 70 75
 Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe
 80 85 90
 Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp
 95 100 105
 Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly
 110 115 120
 Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys
 125 130 135
 Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro
 140 145 150
 Gly Pro Gly Ile Pro Glu Thr Ala Ser Val Val Ala Ile Thr Val
 155 160 165
 Gln Glu Leu Phe Pro Ala Pro Ile Leu Arg Ala Val Pro Ser Ala
 170 175 180
 Glu Pro Gln Ala Gly Ser Pro Met Thr Leu Ser Cys Gln Thr Lys
 185 190 195

Leu	Pro	Leu	Gln	Arg	Ser	Ala	Ala	Arg	Leu	Leu	Phe	Ser	Phe	Tyr	200	205	210
Lys	Asp	Gly	Arg	Ile	Val	Gln	Ser	Arg	Gly	Leu	Ser	Ser	Glu	Phe	215	220	225
Gln	Ile	Pro	Thr	Ala	Ser	Glu	Asp	His	Ser	Gly	Ser	Tyr	Trp	Cys	230	235	240
Glu	Ala	Ala	Thr	Glu	Asp	Asn	Gln	Val	Trp	Lys	Gln	Ser	Pro	Gln	245	250	255
Leu	Glu	Ile	Arg	Val	Gln	Gly	Ala	Ser	Ser	Ser	Ala	Ala	Pro	Pro	260	265	270
Thr	Leu	Asn	Pro	Ala	Pro	Gln	Lys	Ser	Ala	Ala	Pro	Gly	Thr	Ala	275	280	285
Pro	Glu	Glu	Ala	Pro	Gly	Pro	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Ser	290	295	300
Ser	Glu	Asp	Pro	Gly	Phe	Ser	Ser	Pro	Leu	Gly	Met	Pro	Asp	Pro	305	310	315
His	Leu	Tyr	His	Gln	Met	Gly	Leu	Leu	Leu	Lys	His	Met	Gln	Asp	320	325	330
Val	Arg	Val	Leu	Leu	Gly	His	Leu	Leu	Met	Glu	Leu	Arg	Glu	Leu	335	340	345
Ser	Gly	His	Gln	Lys	Pro	Gly	Thr	Thr	Lys	Ala	Thr	Ala	Glu		350	355	

<110> 46

<111> 15

<112> DNA

<113> Artificial Sequence

<120>

<121> Synthetic oligonucleotide probe

<400> 46

aggactgtgt cctcatgg 18

<110> 47

<111> 15

<112> DNA

<113> Artificial Sequence

<120>

<121> Synthetic oligonucleotide probe

<400> 47

tttccagcgc caattctc 18

<110> 48

<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 48
attctctgga ctgtgataga cac 23

<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 49
aaactttagtt gtcttcagtg gctg 24

<211> 10
<212> 48
<213> DNA
<214> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 50
gtgaggagac tgtctgcact gaggagagca gctggcacac ggagg 45

<211> 11
<212> 2181
<213> DNA
<214> Homo sapiens

<400> 51
ctctacggctc cgcacacggc tcgcgcacac ggctcgcacca cgcgtccggg 50
ccacccagaag ttctgagctc ttctgtagca ggaggctgga agaaaaggaca 100
gaacttagctc ttgctgtgat ggggatctta ctgggcttgc tactcttggg 150
gcacctaaaca gtggacaact atggccttcc catcttgga gtgcccagaga 200
gtgtaacagg accttggaag ggggatgtga atcttccctg cacttatgac 250
cccttgcaag gctacaccca agtcttggtg aagtggcttg tacaacgttg 300
ctcagaccct gtcaccatct ttctacgtga ctcttctgga gaccatctcc 350
agcaggcaca gtaccagggc cgcctgcctg tgagccacaa ggttcagga 400
gatgtatccc tccaattgag caccctggag atggatgacc ggagccacta 450
cacgtgtgaa gtcacctggc agactctga tggcaaccaa gtcgtgagag 500

ataagattac tgagctccgt gtcagaaaac tctctgtctc caagcccaca 550
gtgacaactg gcagcgggta tggcttcacg gtgcccacgg gaatgaggat 600
tagccttcaa tgcaggctc ggggttctcc tccatcagt tatattcgg 650
ataagcaaca gactaataac caggaaacca tcaaagtagc aaccttaagt 700
accttaactct tcaagcctgc ggtgatagcc gactcaggct cctattctcg 750
cactgccaag ggcacaggtg gctctgagca gcacagcgac attgtgaagt 800
ttgtggtcac agactcctca aagctactca agaccaagac tgaggcacct 850
acaacctgca cctacccctt gaaagcaaca cctacagtga agcagtcctg 900
ggactggacc actgacatgg atggctacct tggagagacc agtgcctggg 950
caggaaagag cctgcctgtc ttgcacatca cctcctcat cctcttgtgc 1000
tgtatgggtg tcttaccat ggcttatata atgctctgtc ggaagacatc 1050
ccaacaagag catgtctacg aagcagccag gtaagaaagt ctctcctctt 1100
ccattcttga ccccgctcct gccctcaatt ttgattactg gcaggaaatg 1150
tggagggaagg ggggtgtggc acagacccaa ccttaaggcc ggaggccctc 1200
agggtcagga catagctgcc ttcctctctc caggcacctt ctgaggcttc 1250
tttggccctc tgaacacaaa ggataattta gatccatctg ccttctgctt 1300
ccagaatccc tgggtggtag gatcctgata attaatggc aagaattgag 1350
gcagaagggt gggaacccag gaccaagcc ccaagtcctt ccttatgggt 1400
ggtgggtctt tgggcacag ggacatgcc agagaggcca accactctgg 1450
agaaacctg aggttggcca tcttgccaag tggctgcctc agtgatgagc 1500
caacttccca gaatctgggc aacaactact ctgatgagcc ctgcatagga 1550
caggagtacc agatcctgc ccagatcaat ggcaactacg ccgcctctgt 1600
ggacacagtt cctctggatt atgagttctt ggccactgag ggcaaaaagt 1650
tctgttaaaa atgcaccatt aggcacaggat ctgctgacat aattgcctag 1700
tcagtccctg cctctctgat ggcttcttc cctgctacct ctcttccctg 1750
atagcccaaa gtgtccgctt accaaactg gagccgctgg gagtcactgg 1800
ctttgcctg gaatttgcca gatgcactc aagtaagcca gctgctggat 1850
ttgctctgg gccctctag tatctctgcc gggggcttct ggtactctc 1900

tctaaatacc agaggggaaga tgcacataga actaggactt ggtcatcatg 1950
 cctacagaca ctattcaact ttggcatctt gccaccagaa gaccagaggg 2000
 aggtcagct ctggcagctc agaggaccag ctatatccag gatcattctt 2050
 cttcttcag gccacagacag ctattaattg aaattgttat ttcacagggc 2100
 agggttcagt tctgtctctc cactataagt ctaattgtct gactctctcc 2150
 tgggtgctcaa taaatatcta atcataacag c 2181

Q2100 52
 Q2110 321
 Q2120 PRT
 Q2130 Homo sapiens

Q2100 52
 Met Gly Ile Leu Leu Gly Leu Leu Leu Leu Gly His Leu Thr Val
 1 5 10 15
 Asp Thr Tyr Gly Arg Pro Ile Leu Glu Val Pro Glu Ser Val Thr
 20 25 30
 Gly Pro Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro
 35 40 45
 Leu Gln Gly Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg
 50 55 60
 Gly Ser Asp Pro Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp
 65 70 75
 His Ile Gln Gln Ala Lys Tyr Gln Gly Arg Leu His Val Ser His
 80 85 90
 Lys Val Pro Gly Asp Val Ser Leu Gln Leu Ser Thr Leu Glu Met
 95 100 105
 Asp Asp Arg Ser His Tyr Thr Cys Glu Val Thr Trp Gln Thr Pro
 110 115 120
 Asp Gly Asn Gln Val Val Arg Asp Lys Ile Thr Glu Leu Arg Val
 125 130 135
 Gln Lys Leu Ser Val Ser Lys Pro Thr Val Thr Thr Gly Ser Gly
 140 145 150
 Tyr Gly Phe Thr Val Pro Gln Gly Met Arg Ile Ser Leu Gln Cys
 155 160 165
 Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile Trp Tyr Lys Gln
 170 175 180
 Gln Thr Asn Asn Gln Glu Pro Ile Lys Val Ala Thr Leu Ser Thr
 185 190 195

Leu	Leu	Phe	Lys	Pro	Ala	Val	Ile	Ala	Asp	Ser	Gly	Ser	Tyr	Phe
				202					205					210
Cys	Thr	Ala	Lys	Gly	Gln	Val	Gly	Ser	Glu	Gln	His	Ser	Asp	Ile
				215					220					225
Val	Lys	Phe	Val	Val	Lys	Asp	Ser	Ser	Lys	Leu	Leu	Lys	Thr	Lys
				230					235					240
Thr	Glu	Ala	Pro	Thr	Thr	Met	Thr	Tyr	Pro	Leu	Lys	Ala	Thr	Ser
				245					250					255
Thr	Val	Lys	Gln	Ser	Trp	Asp	Trp	Thr	Thr	Asp	Met	Asp	Gly	Tyr
				260					265					270
Leu	Gly	Glu	Thr	Ser	Ala	Gly	Pro	Gly	Lys	Ser	Leu	Pro	Val	Phe
				275					280					285
Ala	Ile	Ile	Leu	Ile	Ile	Ser	Leu	Cys	Cys	Met	Val	Val	Phe	Thr
				290					295					300
Met	Ala	Tyr	Ile	Met	Leu	Cys	Arg	Lys	Thr	Ser	Gln	Gln	Glu	His
				305					310					315
Val	Tyr	Glu	Ala	Ala	Arg									
				320										

<210> 53

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

atgaccccca attgacaccc ctgg 24

<410> 54

<411> 21

<412> DNA

<413> Artificial Sequence

<420>

<423> Synthetic oligonucleotide probe

<400> 54

gttcgaagac atcccaacaa g 21

<410> 55

<411> 14

<412> LNA

<413> Artificial Sequence

<420>

<423> Synthetic oligonucleotide probe

<400> 55

cttcaaatg togtgtggt gctc 24

<410> 56

<411> 24

<412> DNA

<413> Artificial Sequence

<420>

<425> Synthetic oligonucleotide probe

<430> 56

agaaatatcc agcagctggc ttac 24

<440> 57

<441> 57

<442> RNA

<443> Artificial Sequence

<450>

<455> Synthetic oligonucleotide probe

<460> 57

ttaattgaccg gagcaactac aagtgtgaag tcaactggca gactcctgat 50

<470> 57

<471> 1453

<472> DNA

<473> Homo sapiens

<480> 58

gggtggggag cccatctgcc cccaggggca cggggggggg ggcgggctcc 50

ggcggggcac atgggtgcag ccaactcgcg cgcaccccca gggtccgggc 100

ccagctcgcc ccaggtccgt ccgaggggcc cgggcggccc ggagccaagc 150

agtaactgag cgggggaagc ccgcggtccg gggatcggga tgcacctcct 200

ccttcctccc ttgtatgtt cctactatgt tggaaacctg gggactcaca 250

ctgagatcaa gagagtggca gaggaaaagg tcaactttgc ctgcacccat 300

caactggggc ttccagaaaa agacactctg gatattgaat ggtgtgtcac 350

ctataatgaa gggaaccaaa aagtgtgtgat cacttactcc agtcgtccatg 400

tctacaataa cttgactgag gaacagaagg gcgagatggc ctttgctccc 450

aatctcttgg caggagatgc ctcccttgag attgaacctc tgaagcccag 500

tgatgagggc cggtaacct gtaagggtta gaattcaggg cgtacagtgt 550

cgagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600

gagtttggag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650

gtcatcctct ggcacagagc ccatttgtta ttactggcag cgaatccag 700
agaaagaggg agaggatgaa cgtctgcctc ccaaatctag gattgactac 750
aaccaacctg gaagagttct gctgcagaat cttaccatgt cctactctgg 800
actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850
tgagagttaa tgtacagtat gtacaaagca tgggcattgt tgcaggagca 900
gtgacaggca tagtggctgg agccctgctg attctcctct tgggtgtggct 950
gctaattcca aggaagaca aagaagata tgaggaagaa gagagacctc 1000
atgaaattcg agaagatgct gaagctccaa aagccctctt tctgaaacct 1050
agctcctctt cctcaggctc tggagctca cgtctgggtt cttcctccac 1100
tcgtccaca gcaaatagtg cctcagcag ccagcggaca ctgtcaactg 1150
accagcacc ccagccaggg ctggccacc aggcatacag cctagtgggg 1200
ccagaggtga gaggttctga accaaagaaa gtccaccatg ctaattctga 1250
caaagcagaa accacacca gcatgatccc cagccagagc agagccttc 1300
aaacggtctg aattacaatg gacttgactc ccacgcttc ctaggagtca 1350
gggtctctgg actctctctg tcattggagc tcaagtccac agccacacaa 1400
ccagatgaga ggtcatctaa gtacagtgga gcattgcacg gaacagatto 1450
agatgagcat tctccttata caataccaaa caagcaaaag gatgtaagct 1500
gattcatctg taaaaaggca tcttattctg cctttagacc agagtaaggg 1550
aaagcaggag tccaaatcta ttgtttgacc aggaacctgt gtgagaaggt 1600
tggggaaaag tgaggtgaat atacctaaaa cttttaatgt gggatattct 1650
gtatcagtcg ttgattccac aattttcaag aggaaatggg acgtctctg 1700
taaatctct atgcattctt gcaaacctat tggattatta gtcattcaga 1750
cagtcaggca gaacccacag ccttattaca cctgtctaca ccattgactg 1800
agctaaccc tcttaagaaa ctccaaaaaa ggaaacatgt gtctctctatt 1850
ctgaactaac ttcatttgtc ataaggtttg gatattaatt tcaaggggag 1900
ctgaaatagt gggagatgga gaagagtga tgagtttctc ccactctata 1950
ctaattctac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000
aatttgtgac aaaggattgt gaagagcttc ccattctcat gatgttatga 2050
ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100

cctcaaatca gatgcctcta aggaatttcc tgctagatat ttctggaagg 2150
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga atttttttag 2200
 agaaaaaggg atctaggaat gctgaaagat taccbaacat accattatag 2250
 totttttttt ctgagaaaat gtgaaaccag aattggaaga ctgggtggac 2300
 tagaaagggg gattagatca gttttttttt aatatgtcaa ggaaggttag 2350
 cgggcctggg gccagggacc tctaggaaaa tccagcaggt ggaaggttga 2400
 gtgagccgag attatggcat tgcctccag cctgggtgac agagcgggac 2450
 tccgtctc 2458

<210> 59
 <211> 373
 <212> PRT
 <213> Homo sapiens

<300> 59
 Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly
 1 5 10 15
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys
 20 25 30
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro

170										175					180				
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu					
				185					190					195					
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala					
				200					205					210					
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val					
				215					220					225					
Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly					
				230					235					240					
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu					
				245					250					255					
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro					
				260					265					270					
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val					
				275					280					285					
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly					
				290					295					300					
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln					
				305					310					315					
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr					
				320					325					330					
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro					
				335					340					345					
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro					
				350					355					360					
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val							
				365					370										

<210> 60

<211> 61

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<230> 60

gcagtgacac gcaggcaacg aagc 24

<210> 61

<211> 62

<212> RNA

<213> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 61

actaggctgt atgctgggt gggc 24

<10> 62

<11> 43

<12> DNA

<13> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 61

gtatgtacaa agcatggga tgggtgcagg agcagtgaca ggc 43

<10> 63

<11> 3534

<12> DNA

<13> Homo sapiens

<400> 63

gtcgttcctt tgcctctctg cgcacagtc cctcctctgg ttctctctag 50

cagctctcgg aggagagcac cggagacgc gggctgcagt cggcgcggt 100

tctccacgac tggcgcggtt cgcagctggg caggtgctga gcgcacctag 150

agcctcctt gcgcctccc tctctgcac ggcgcagca gtgcacatgg 200

ggtgttagag gtagatgggc tcccgcccg gcaggcggcg gtggatggg 250

cgtcggcag aagcagcgc cgttcacgc tgcacgcgc gcccgggcg 300

cactcgag tcccggttc agcatggg acctctcga gcagcagcac 350

cgcctcgc tctgcagc gcctgcgc cagagcaca gccacgatga 400

tgcgggctc cctctctctg ctggattcc ttagcacac cacagctcag 450

cacaaacaga aggcctcgaa tctcattgga acatacgc acgttgacgc 500

tgcacccgc caggtgctaa cctgtgacaa gtgtccagca ggaacctatg 550

tctctgagca ttgtaccaac acaagcctgc ggtctgcag cagttgcct 600

gtggggacct ttaccaggca tgagaatgga atagagaaat gccatgactg 650

tagtcagcgc tgcacatgga caatgattga gaaattacct tctgtgct 700

tgaatgacgc agaatgcact tgcacacctg gcctgttcca gtctaacgt 750

acctgtgccc cccatacggg gtgtcctgtg ggttgggggtg tcgggaagaa 800

agggacagag actgaggatg tcgggtgtaa gcagtgtgct cggggtacct 850

totoagatgt gcoottotagt gtgatgaaat gcaaagcata cacagactgt 900
ctgagtcaga acctgggtggt gatcaagcag gggaccaagg agacagacaa 950
agtctgtggc acactccctg cctttctccag ctccacctca ccttccctg 1000
gcacagccat ctttccacgc cctgagccaa tggaaaacca tgaagtccct 1050
ccctccactt atgttcccaa aggcctgaac tcaacagaat ccaactcttc 1100
tgcctctgtt agacaaaagg tactgagtay catccaggaa gggacagtcc 1150
ctgacaacac aagctccagca agggggaagg aagactgaa caagacccctc 1200
ccaaaaccttc aggtagtcaa ccaccaggaa ggcctccacc acagacacat 1250
cctgaagctg ctgcctcca tggaggccac tggggggcag aagtccagca 1300
cgccatcaa gggccccaag aggggacatc ctagacagaa cctacacaag 1350
cattttgaca tcaatgagca tttgcctgg atgattgtgc ttttctgtct 1400
gctggtgctt gctgtgattg tgggtgtcag tatccggaaa agctccagga 1450
ctctgaaaaa ggggcctcgg caggatccca gtgcctattgt ggaaaaggca 1500
gggtggaaga aatccatgac cccaacccag aacggggaga aatggatcta 1550
ctactgcaat ggcctcggta cagatctct gaagcttgta gcagcccaag 1600
tgggaagcca gtggaaagat atctatcagt ccttttgcaa tgcagtgag 1650
agggaggttg ctgctttctc caatgggtac acagccgacc acgagcgggc 1700
ctacgcagct ctgcagcact ggacatccg gggccccgag gcagcctcg 1750
cccagctaat tagcgccctg cgcagccacc ggagaaacga tgttgtggag 1800
aagattcctg ggtgatgga agacacccac cagctggaaa ctgacaaact 1850
agctctcccg atgagcccca gcccgttag ccgagcccc atccccagcc 1900
ccaaagcgaa acctgagaat ccgctctcc tgaagggtga gccttcccca 1950
caggacaaga acaagggtct cttcgtggat gactcggagc ccttctcccg 2000
ctgtgaactt acatccagcg gctcctccgc gctgagcagg aacggttctt 2050
ttattaccaa agaaaaagag gacacagtgt tggggcaggt acgctggac 2100
ccctgtgaet tgcagcctat cttgatgac atgctccact tctaaaatcc 2150
tgaggagctg cgggtgattg aagagattcc ccaggctgag gacaaaactag 2200
aacggctatt cgaaattatt ggagtcaaga gccagggaag cagccagacc 2250
ctcctggaet ctgtttatag ccctcttctt gaactgtgtt agaacatagg 2300

gatactgcac tctggaaatt actcaattta gtggcagggc ggttttttaa 2250
 tttttctctg tttctgattt ttgtgtttt gggtgtgtgt ggtgttttgt 2300
 gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtttaacaga gaatatggcc 2350
 agtgcttgag ttctttctcc ttctctctct ctcttttttt tttaaataac 2400
 tctcttgga agtgggttta taagcctttg ccaggtgtaa ctgttggtga 2450
 ataccacca cttaaagtttt ttaagttcca tattttctcc atttgccct 2500
 ctatgtatt tccaagatta ttctgtgcac tttaaattta cttaacttac 2550
 cataaatgca gtgtgaattt tcccacacac tggattgtga ggctcttaac 2600
 ttcttaaaag tataatggca tctgtgcaat cctataagca gtcttctatgt 2650
 ctcttaacac tcacacctac tttttaaaaa caaatattat tactattttt 2700
 attattgttt gtctttata aattttctta agattaaga aaattcaaga 2750
 cccattgag ttactgtaat gcaattcaac ttgagttat ctttttaata 2800
 tgtctgtat agtctatatt catggctgaa actgaccac actattgctg 2850
 attgtatggt ttccacctgg acacgtgta gaatgctga ttactgtac 2900
 tcttctatg ctaatatgt ctgggtgga gaaatgaaat cctcaagcca 2950
 ccaggattg ctatttaagt ggcttgacaa ctgggcacac aaagaacttg 3000
 aacttcact tttaggattt gagctgtctt ggaacacatt gctgcacttc 3050
 ggaaagtcaa aatcaagtgc cagtgggcgc cttccatag agaatttgcc 3100
 cagctttgct ttaaaagatg tctgttttt tatatacaca taatcaatag 3150
 gtcnaatctg ctctcaagga cttygtctg gtgggattcc ttcaccaatt 3200
 actttaatta aaaatggctg caactgtaag aaccttctg tgatatattt 3250
 gcaactatgc tccatttac aaatgtacct tctaattgct agttgcacgg 3300
 ttcnaatgca aagggtgggt ggaactccct tgtgtgggtg gggtttgtgg 3350
 gtagtgggtga aggacgata tcagaaaaat gccttcaagt gtactaattt 3400
 attuataaac attaggtgtt tgttaaaaaa aaaa 3534

<210> 64
 <211> 655
 <212> PRT
 <213> Homo sapiens
 <400> 64

Met	Gly	Thr	Ser	Pro	Ser	Ser	Ser	Thr	Ala	Leu	Ala	Ser	Cys	Ser	1	5	10	15
Arg	Ile	Ala	Arg	Arg	Ala	Thr	Ala	Thr	Met	Ile	Ala	Gly	Ser	Leu	20	25	30	35
Leu	Leu	Leu	Gly	Phe	Leu	Ser	Thr	Thr	Thr	Ala	Gln	Pro	Glu	Gln	35	40	45	50
Lys	Ala	Ser	Asn	Leu	Ile	Gly	Thr	Tyr	Arg	His	Val	Asp	Arg	Ala	55	60	65	70
Thr	Gly	Gln	Val	Leu	Thr	Cys	Asp	Lys	Cys	Pro	Ala	Gly	Thr	Tyr	75	80	85	90
Val	Ser	Gln	His	Cys	Thr	Asn	Thr	Ser	Leu	Arg	Val	Cys	Ser	Ser	95	100	105	110
Cys	Pro	Val	Gly	Thr	Phe	Thr	Arg	His	Gln	Asn	Gly	Ile	Glu	Lys	115	120	125	130
Cys	His	Asp	Cys	Ser	Gln	Pro	Cys	Pro	Trp	Pro	Met	Ile	Glu	Lys	135	140	145	150
Leu	Pro	Cys	Ala	Ala	Leu	Thr	Asp	Arg	Gln	Cys	Thr	Cys	Pro	Pro	155	160	165	170
Gly	Met	Phe	Gln	Ser	Asn	Ala	Thr	Cys	Ala	Pro	His	Thr	Val	Cys	175	180	185	190
Pro	Val	Gly	Trp	Gly	Val	Arg	Lys	Lys	Gly	Thr	Glu	Thr	Glu	Asp	195	200	205	210
Val	Arg	Cys	Lys	Gln	Cys	Ala	Arg	Gly	Thr	Phe	Ser	Asp	Val	Pro	215	220	225	230
Ser	Ser	Val	Met	Lys	Cys	Lys	Ala	Tyr	Thr	Asp	Cys	Leu	Ser	Gln	235	240	245	250
Asn	Leu	Val	Val	Ile	Lys	Pro	Gly	Thr	Lys	Glu	Thr	Asp	Asn	Val	255	260	265	270
Cys	Gly	Thr	Leu	Pro	Ser	Phe	Ser	Ser	Ser	Thr	Ser	Pro	Ser	Pro	275	280	285	290
Gly	Thr	Ala	Ile	Phe	Pro	Arg	Pro	Glu	His	Met	Glu	Thr	His	Gln	295	300	305	310
Val	Pro	Ser	Ser	Thr	Tyr	Val	Pro	Lys	Gly	Met	Asn	Ser	Thr	Glu	315	320	325	330
Ser	Asn	Ser	Ser	Ala	Ser	Val	Arg	Pro	Lys	Val	Leu	Ser	Ser	Ile	335	340	345	350
Gln	Glu	Gly	Thr	Val	Pro	Asp	Asn	Thr	Ser	Ser	Ala	Arg	Gly	Lys	355	360	365	370

Glu Asp Val Asn Lys Thr Leu Pro Asn Leu Gln Val Val Asn His	240	245	300
Gln Gln Gly Pro His His Arg His Ile Leu Lys Leu Leu Pro Ser	305	310	315
Met Glu Ala Thr Gly Gly Glu Lys Ser Ser Thr Pro Ile Lys Gly	320	325	330
Pro Lys Arg Gly His Pro Arg Gln Asn Leu His Lys His Phe Asp	335	340	345
Ile Asn Glu His Leu Pro Trp Met Ile Val Leu Phe Leu Leu Leu	350	355	360
Val Leu Val Val Ile Val Val Cys Ser Ile Arg Lys Ser Ser Arg	365	370	375
Thr Leu Lys Lys Gly Pro Arg Gln Asp Pro Ser Ala Ile Val Glu	380	385	390
Lys Ala Gly Leu Lys Lys Ser Met Thr Pro Thr Gln Asn Arg Glu	395	400	405
Lys Trp Ile Tyr Tyr Cys Asn Gly His Gly Ile Asp Ile Leu Lys	410	415	420
Leu Val Ala Ala Gln Val Gly Ser Gln Trp Lys Asp Ile Tyr Gln	425	430	435
Phe Leu Cys Asn Ala Ser Glu Arg Glu Val Ala Ala Phe Ser Asn	440	445	450
Gly Tyr Thr Ala Asp His Glu Arg Ala Tyr Ala Ala Leu Gln His	455	460	465
Trp Thr Ile Arg Gly Pro Glu Ala Ser Leu Ala Gln Leu Ile Ser	470	475	480
Ala Leu Arg Gln His Arg Arg Asn Asp Val Val Glu Lys Ile Arg	485	490	495
Gly Leu Met Glu Asp Thr Thr Gln Leu Glu Thr Asp Lys Leu Ala	500	505	510
Leu Pro Met Ser Pro Ser Pro Leu Ser Pro Ser Pro Ile Pro Ser	515	520	525
Pro Asn Ala Lys Leu Glu Asn Ser Ala Leu Leu Thr Val Glu Pro	530	535	540
Ser Pro Gln Asp Lys Asn Lys Gly Phe Phe Val Asp Glu Ser Glu	545	550	555
Pro Leu Leu Arg Cys Asp Ser Thr Ser Ser Gly Ser Ser Ala Leu	560	565	570

Ser Arg Asn Gly Ser Phe Ile Thr Lys Glu Lys Lys Asp Thr Val
575 580 585

Leu Arg Gln Val Arg Leu Asp Pro Cys Asp Leu Gln Pro Ile Phe
590 595 600

Asp Asp Met Leu His Phe Leu Asn Pro Glu Glu Leu Arg Val Ile
605 610 615

Glu Glu Ile Pro Gln Ala Glu Asp Lys Leu Asp Arg Leu Phe Glu
620 625 630

Ile Ile Gly Val Lys Ser Gln Glu Ala Ser Gln Thr Leu Leu Asp
635 640 645

Ser Val Tyr Ser His Leu Pro Asp Leu Leu
650 655

<110> 65

<111> 74

<112> DNA

<113> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 65

gtatgagttgc acatgggggtg ttgg 24

<110> 66

<111> 74

<112> DNA

<113> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 66

acagacacac ctacgtctct gtcc 24

<110> 67

<111> 80

<112> DNA

<113> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 67

acgatctctg cgggctccct tctctgtctt ggattcctta gcaccaccac 50

<110> 68

<111> 1412

<112> DNA

<113> Homo sapiens

<400> 68

atgggaagcc agtaacactg tggcctacta tctcttccgt ggtgccatct 50
 acatttttgg gactcgggaa ttatgaggta gaggtggagg cggagccgga 100
 tgtcagaggt cctgaaatag tcaccatggg ggaaaatgat ccgcctgctg 150
 ttgaagccc cttctcattc cgatcgcttt ttggccttga tgatttgaaa 200
 ataagtctg ttgcaccaga tgcagatgct gttgctgcac agatcctgtc 250
 aotgctgcca ttgaagtttt ttccaatcat cgtcattggg atcattgcat 300
 tgatattaga actggccatt ggtctgggca tcacattga ctgctcaggg 350
 aagtaacgat gtcgctcctc cttcaagtgt atcgagctga tagctcgatg 400
 tgacggagtc ccggattgca aagacgggga ggacgagta cgtctgtctc 450
 gggcgggtgg ccagaatgcc gtgctccagg cgttcacaga tgcctcgtgg 500
 aagaccatgt gctccgatga ctggaagggt cactacgcaa atgttgccctg 550
 tgcacaaactg ggtttcccaa gctatgtgag ttacagataa ctacagatga 600
 gctcctcga ggggcagttc cgggaggagt ttgtgtccat cgatcacctc 650
 ttgcacagat acaaggtgac tgcattacac cactcagtat atgtcagggg 700
 gggatgtgac tctgggcacg tggttacctt gcagtgaca gctctgggtc 750
 atagaagggg ctacagctca cgcctcgtgg tgggaaacat gtccttgcctc 800
 tgcagtggtc cctggcagga cagccttcag ttccagggtt accacctgtg 850
 cgggggtctt gtcctcagc cctctgtggat cactcactgt gcacactgtg 900
 tttatgaact gtacctccc aagtcattga ccctccaggt gggctcagtt 950
 cccctgttgg acaatccagc cccatccac ttgggtggaga agattgtcta 1000
 ccacagcaag tacaagccaa ajaggctggg caatgacac gcccttatga 1050
 agctggccgg gccactcag ttcaatgaaa tgatccagcc tgtgtgcctg 1100
 cccaaactct aagagaactt ccccgatgga aaagtgtgct ggacgtcagg 1150
 atggggggcc acagaggatg gaggtgacgc ctcccctgtc ctgaaccacg 1200
 cggcgttccc ttgatttcc aacaagatct gcaaccacag ggacgtgtac 1250
 ggtggcatca tctcccctc catgctctgc gggggctacc tgaagggtgg 1300
 cgtggacagc tgcacggggg acagcggggg gccctcgtgt tgtcaagaga 1350
 ggaggctgtg gaagttagtg ggagcgacca gctttggcat cggctcgcca 1400
 gaggtgaaca agcctggggg gtacaccctg gtcacctct tctggactg 1450

gatccacgag cagatggaga gagacctaaa aacctgaaga ggaaggggac 1500
aagtagccac ctgagttctt gaggtgatga agacagcccg atcctccctt 1550
ggactccgtt gtaggaacct gcacacgagc agacaccttt ggagctctga 1600
gttcgggcac cagtagcagg ccggaagag gcacctttcc atctgattcc 1650
agcacaacct tcaagctgtt ttttgttttt tgtttttttg aggtggagtc 1700
tcgtctctgtt gccaggtctg gagtgcagtg gcgaaatccc tgcctactgc 1750
agctccgctt cccctggttc aagcgattct cttgcctcag cttcccccagt 1800
agctgggacg acaggtgcgc gccaccacac ccaactaatt ttgtatttt 1850
tagtagagac aggggttccac catgttgggc aggtctctct caaacccctg 1900
acctcaaatg atgtgcctgc ttccagctcc caccgtgctg ggattacagg 1950
catggggcac cagccttagc ctccagctcc tttctgattt tcaactaaga 2000
caaaagaagc agcaacttgc aagggggggc tttccactg gtccatctgg 2050
ttttctctcc agggctcttc aaaattccctg acgagataag cagttatgtg 2100
acctcactg ccaagccacc aacagccact cagaaaagac gcaccagccc 2150
agaagtgcag aactgcagtc actgcacgtt ttcatctcta gggaccagaa 2200
ccaaacccac cctttctact tccaagactt atttccacat gtggggaggt 2250
taatctagga atgaactggt taaggccatc ttccatgatt tcttgcagc 2300
atttgytgtt tgaagtata ttgtcccttg attccaaata atatgtttcc 2350
ttccctcatt gtctggcgcg cctgcgtgga ctggtgacgt gaatcaaaat 2400
catccactga aa 2412

<211> 69
<212> 453
<213> PRT
<215> Homo sapiens

<400> 69
Met Gly Glu Asn Asp Pro Pro Ala Val Glu Ala Pro Phe Ser Phe
1 3 10 17
Arg Ser Leu Phe Gly Leu Asp Asp Leu Lys Ile Ser Pro Val Ala
20 25 32
Pro Asp Ala Asp Ala Val Ala Ala Gln Ile Leu Ser Leu Leu Pro
35 40 46
Leu Lys Phe Phe Pro Ile Ile Val Ile Gly Ile Ile Ala Leu Ile

50					55					60				
Leu	Ala	Leu	Ala	Ile	Gly	Leu	Gly	Ile	His	Phe	Asp	Cys	Ser	Gly
				65					70					75
Lys	Tyr	Arg	Cys	Arg	Ser	Ser	Phe	Lys	Cys	Ile	Glu	Leu	Ile	Ala
				80					85					90
Arg	Cys	Asp	Gly	Val	Ser	Asp	Cys	Lys	Asp	Gly	Glu	Asp	Glu	Tyr
				95					100					105
Arg	Cys	Val	Arg	Val	Gly	Gly	Gln	Asn	Ala	Val	Leu	Gln	Val	Phe
				110					115					120
Thr	Ala	Ala	Ser	Trp	Lys	Thr	Met	Cys	Ser	Asp	Asp	Trp	Lys	Gly
				125					130					135
His	Tyr	Ala	Asn	Val	Ala	Cys	Ala	Gln	Leu	Gly	Phe	Pro	Ser	Tyr
				140					145					150
Val	Ser	Ser	Asp	Asn	Leu	Arg	Val	Ser	Ser	Leu	Glu	Gly	Gln	Phe
				155					160					165
Arg	Glu	Glu	Phe	Val	Ser	Ile	Asp	His	Leu	Leu	Pro	Asp	Asp	Lys
				170					175					180
Val	Thr	Ala	Leu	His	His	Ser	Val	Tyr	Val	Arg	Glu	Gly	Cys	Ala
				185					190					195
Ser	Gly	His	Val	Val	Thr	Leu	Gln	Cys	Thr	Ala	Cys	Gly	His	Arg
				200					205					210
Arg	Gly	Tyr	Ser	Ser	Arg	Ile	Val	Gly	Gly	Asn	Met	Ser	Leu	Leu
				215					220					225
Ser	Gln	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln	Phe	Gln	Gly	Tyr	His
				230					235					240
Leu	Cys	Gly	Gly	Ser	Val	Ile	Thr	Pro	Leu	Trp	Ile	Ile	Thr	Ala
				245					250					255
Ala	His	Cys	Val	Tyr	Asp	Leu	Tyr	Leu	Pro	Lys	Ser	Trp	Thr	Ile
				260					265					270
Gln	Val	Gly	Leu	Val	Ser	Leu	Leu	Asp	Asn	Pro	Ala	Pro	Ser	His
				275					280					285
Leu	Val	Glu	Lys	Ile	Val	Tyr	His	Ser	Lys	Tyr	Lys	Pro	Lys	Arg
				290					295					300
Leu	Gly	Asn	Asp	Ile	Ala	Leu	Met	Lys	Leu	Ala	Gly	Pro	Leu	Thr
				305					310					315
Phe	Asn	Glu	Met	Ile	Gln	Pro	Val	Cys	Leu	Pro	Asn	Ser	Glu	Glu
				320					325					330
Asn	Phe	Pro	Asp	Gly	Lys	Val	Cys	Trp	Thr	Ser	Gly	Trp	Gly	Ala

	335	340	345
Thr Glu Asp Gly Gly Asp Ala Ser Pro Val Leu Asn His Ala Ala	350	355	360
Val Pro Leu Ile Ser Asn Lys Ile Cys Asn His Arg Asp Val Tyr	365	370	375
Gly Gly Ile Ile Ser Pro Ser Met Leu Cys Ala Gly Tyr Leu Thr	380	385	390
Gly Gly Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val	395	400	405
Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr Ser Phe	410	415	420
Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly Val Tyr Thr Arg	425	430	435
Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met Glu Arg Asp	440	445	450

Leu Lys Thr

<210> 70

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<230> 71

tgacatggcc attatgaagc tggc 24

<210> 71

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<230> 71

tacacgtccc tgtggttgca gata 24

<210> 71

<211> 76

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<230> 72

ngttcaatgc agaaatgata cagcctgtgt gcctgcccc aaatctgaagag 50

<110> 73

<111> 3305

<112> DNA

<113> Homo sapiens

<100> 73

ccccagcgtc cgtccctagtc cccggggccaa ctgggacagt ttgctcattt 50

attgcaacgg tcaaggctgg attgtgccc aacggggcgc ggcggcgcc 100

gcacgcacac acacgggggg aaactttttt aaaaatgaaa ggctagaaga 150

gtccagcggc ggcgcgggcg ctggcgcgagg gctccggagg tgactcgccg 200

aggcaggaaa tccctccggt cgcgacgccc ggcccgggtt cggcgcccg 250

gtgggatggt gcagcgctcg cggccggggc cgagagctgc tgcactgaag 300

gcggcgacg atggcagcgc gcccgctgac cgtgtcccc gcccgcgcc 350

tccctgctgc cctggccggt gctctgctcg cgcctcgga ggcccagggt 400

gtgagcttat ggaaccaagg aagagctgat gaagtgtca gtgcctctgt 450

tggagtggtt gacctctgga tccagtgaa gagcttcgac tccaagaatc 500

atccagaagt gctgaatatt cgactacac gggaaagcaa agaatgata 550

ataaatctgg aaagaaatga aggttcatt gccagcagtt tcccgaaa 600

ccactatctg caagaaggta ctgattctc cctcgctcga aattacaggt 650

ctcactgtta ctaccatgga catgtaagg gatattctga ttcagcagtc 700

agttccagca cgtgttctgg tctcagggga cttatttgtt ttgaaaatga 750

aagctatgtc ctagaacca tgaaaagtgc aaccaacaga tacaacctct 800

tccagcgaa gaagctgaaa agcgccgggt gatcatggg atccatcac 850

aacacacaa acctcgctgc aaagaatgtt ttccacacac cctctcagac 900

atgggcacga aggcataaaa gagagaccc caaggcaact aagtatgtgt 950

agctggtgat cgtggcagac aaccgagagt ttcagagga aggaaaagat 1000

ctggaaaaag ttaagcagcg attaatagag attgctaatc acgttgacaa 1050

gttttacaga ccactgaaca ttgggatcgt gttggtaggc gtggaagtgt 1100

ggaatgacat ggacaaatgc tctgtaagtc aggacccatt caccagcttc 1150

catgaatttc tggactggag gaagatgaag cttctacctc gcaaatccca 1200

tgacaatgag cagcttgta gtgggggtta ttccaaagg accaccatcg 1250

goatggcccc aatcatgagc atgtgcacgg cagaccagtc tgggggaatt 1300
gtcatggacc attcagacaa tcccccttggc gcagccgtga cccctggaca 1350
tgagctgggc cacaatttcg ggatgaatca tgacacactg gacaggggct 1400
gtagctgtca aatggggggt gagaaaggag gctgcacat gaaagcttc 1450
acggggtacc catttcocat ggtgttcagc agttgcagca ggaaggactt 1500
ggagaccagc ctggagaaaag gaatgggggt gtgcctgttt aacctggcgg 1550
aagtcaggga gtctttcggg ggcagaaat gtgggaacag atttgtggaa 1600
gaaggagagg agtgtgaactg tggggagcca gaggaatgta tgaatcgtg 1650
ctgcaatgac accacctgta cctgaagcc ggaagctgtg tggcacatg 1700
ggctgtgctg tgaagaactgc cagctgaagc ctgcaggaac agcgtgcagg 1750
gactccagca actcctgtga cctccagag tctgcacag gggccagccc 1800
tcactgccc gccaatgtgt acctgcacga tgggcactca tgtcaggatg 1850
tggacggcta ctgctacaat ggcacctgac agactcacga gcagcagctt 1900
gtcacgtctt ggggaccagg tgcataacct gcccctggga tctgctttga 1950
gagagtcatt tctgcaggtg atccttatgg caactgtgga aaagtctcga 2000
agagttoctt tgcataatgc gagatgagag atgctaaatg tggaaaaato 2050
cagtgtcaag gaggtgcacg ccggccagtc attggtacca atgccgtttc 2100
catagaaaca aacatccctc tgcagcaagg aggcgggatt ctgtgcaggg 2150
ggaccacgtg gtaactgggc gatgacatgc cggaccaggg gcttggcttc 2200
gcaggcacaa agtgtgcaga tggaaaaato tgcctgaatc gccaatgtca 2250
aaatattagt gtctttgggg tccacgagtg tgcattgcag tggcacggca 2300
gaggggtgtg caacaacagg aagaactgac actgcgagga ccaactggga 2350
cccctctctt gtgacaagtt tggcttttga ggaagcacag acagcggccc 2400
catccggcaa gcagaagcaa ggcaggaagc tgcagagtc cacaagggagc 2450
ggggccaggg ccaggagccc gtgggcatgc aggagcatgc gtctactgac 2500
cactgacac tcatctgagc cctcccatga catggagacc gtgaccagtg 2550
ctgtgcaga ggaagtcacg cgtccccaag gctcctgtg actggcacga 2600
ttgaactctg ggctttgcca tggtttcac gacaacagac acaacacagt 2650

tctcggggct caggagggga agtcacagct accagggaag tatgcagaaa 2700
 cagtgcgaag aagggcagcg acttcctggg cgagcttctg ctaaaacatg 2750
 gaacatgcttc agtgcgtgctc ctgagagagt agcaggttac cactctggca 2800
 ggcaccagcc ctgcagcaag gaggaagagg actcaaaagt ctggcctttc 2850
 actgagcctc cacagcagtg ggggagaagc aaggggtggg cccagtgctc 2900
 cctttcccca gtgacacctc agccttggca gcctgatga ctggctctctg 2950
 gctgcaactt aatgcctctga tatggctttt agcatttatt atatgaaaat 3000
 agcaggggtt tagtttttaa ttatcagag accctggcac ccattccatc 3050
 tccatccaag caaacctgaat ggcaatgaaa caaacctggag aagaaggtag 3100
 cagaaggggc ggtgaactct ggcctcttgc tctggacatg cgtgaccaga 3150
 agtaactcagg tttaggggtt tgcagaaagc cagggaaccc acagagtcac 3200
 caaccccttc tttacaagt aagaatgtta aaaagtgaac acaatgtaag 3250
 agcctaactc catcccccgt ggccattact gcataaata gactgcattt 3300
 gaaat 3305

<210> 74

<211> 715

<212> PRT

<213> Homo sapiens

<400> 74

Met	Ala	Ala	Arg	Pro	Leu	Pro	Val	Ser	Pro	Ala	Arg	Ala	Leu	Leu
1				5					10					15
Leu	Ala	Leu	Ala	Gly	Ala	Leu	Leu	Ala	Pro	Cys	Glu	Ala	Arg	Gly
				20					25					30
Val	Ser	Leu	Trp	Asn	Gln	Gly	Arg	Ala	Asp	Glu	Val	Val	Ser	Ala
				35					40					45
Ser	Val	Arg	Ser	Gly	Asp	Leu	Trp	Ile	Pro	Val	Lys	Ser	Phe	Asp
				50					55					60
Ser	Lys	Asn	His	Pro	Glu	Val	Leu	Asn	Ile	Arg	Leu	Gln	Arg	Glu
				65					70					75
Ser	Lys	Glu	Leu	Ile	Ile	Asn	Leu	Glu	Arg	Asn	Glu	Gly	Leu	Ile
				80					85					90
Ala	Ser	Ser	Phe	Thr	Glu	Thr	His	Tyr	Leu	Gln	Asp	Gly	Thr	Asp
				95					100					105
Val	Ser	Leu	Ala	Arg	Asn	Tyr	Thr	Gly	His	Cys	Tyr	Tyr	His	Gly
				110					115					120

His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys	135	139	145
Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val	145	149	150
Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro	155	160	165
Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His	170	175	180
Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser	185	190	195
Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr	201	205	210
Lys Tyr Val Glu Leu Val Ile Val Ala Asp Asn Arg Glu Phe Glu	215	220	225
Arg Gln Gly Lys Asp Leu Glu Lys Val Lys Gln Arg Leu Ile Glu	230	235	240
Ile Ala Asn His Val Asp Lys Phe Tyr Arg Pro Leu Asn Ile Arg	245	250	255
Ile Val Leu Val Gly Val Glu Val Trp Asn Asp Met Asp Lys Cys	260	265	270
Ser Val Ser Gln Asp Pro Phe Thr Ser Leu His Glu Phe Leu Asp	275	280	285
Trp Arg Lys Met Lys Leu Leu Pro Arg Lys Ser His Asp Asn Ala	290	295	300
Gln Leu Val Ser Gly Val Tyr Phe Gln Gly Thr Thr Ile Gly Met	305	310	315
Ala Pro Ile Met Ser Met Cys Thr Ala Asp Gln Ser Gly Gly Ile	320	325	330
Val Met Asp His Ser Asp Asn Pro Leu Gly Ala Ala Val Thr Leu	335	340	345
Ala His Glu Leu Gly His Asn Phe Gly Met Asn His Asp Thr Leu	350	355	360
Asp Arg Gly Cys Ser Cys Gln Met Ala Val Glu Lys Gly Gly Cys	365	370	375
Ile Met Asn Ala Ser Thr Gly Tyr Pro Phe Pro Met Val Phe Ser	380	385	390
Ser Cys Ser Arg Lys Asp Leu Glu Thr Ser Leu Glu Lys Gly Met	395	400	405

Gly Val Cys Leu Phe Asn Leu Pro Glu Val Arg Glu Ser Phe Gly	410	415	420
Gly Gln Lys Cys Gly Asn Arg Phe Val Glu Glu Gly Glu Glu Cys	425	430	435
Asp Cys Gly Glu Pro Glu Glu Cys Met Asn Arg Cys Cys Asn Ala	440	445	450
Thr Thr Cys Thr Leu Lys Pro Asp Ala Val Cys Ala His Gly Leu	455	460	465
Cys Cys Glu Asp Cys Gln Leu Lys Pro Ala Gly Thr Ala Cys Arg	470	475	480
Asp Ser Ser Asn Ser Cys Asp Leu Pro Glu Phe Cys Thr Gly Ala	485	490	495
Ser Pro His Cys Pro Ala Asn Val Tyr Leu His Asp Gly His Ser	500	505	510
Cys Gln Asp Val Asp Gly Tyr Cys Tyr Asn Gly Ile Cys Gln Thr	515	520	525
His Glu Gln Gln Cys Val Thr Leu Trp Gly Pro Gly Ala Lys Pro	530	535	540
Ala Pro Gly Ile Cys Phe Gln Arg Val Asn Ser Ala Gly Asp Pro	545	550	555
Tyr Gly Asn Cys Gly Lys Val Ser Lys Ser Ser Phe Ala Lys Cys	560	565	570
Glu Met Arg Asp Ala Lys Cys Gly Lys Ile Gln Cys Gln Gly Gly	575	580	585
Ala Ser Arg Pro Val Ile Gly Thr Asn Ala Val Ser Ile Glu Thr	590	595	600
Asn Ile Pro Leu Gln Gln Gly Gly Arg Ile Leu Cys Arg Gly Thr	605	610	615
His Val Tyr Leu Gly Asp Asp Met Pro Asp Pro Gly Leu Val Leu	620	625	630
Ala Gly Thr Lys Cys Ala Asp Gly Lys Ile Cys Leu Asn Arg Gln	635	640	645
Cys Gln Asn Ile Ser Val Phe Gly Val His Glu Cys Ala Met Gln	650	655	660
Cys His Gly Arg Gly Val Cys Asn Asn Arg Lys Asn Cys His Cys	665	670	675
Glu Ala His Trp Ala Pro Pro Phe Cys Asp Lys Phe Gly Phe Gly	680	685	690

Gly Ser Thr Asp Ser Gly Pro Ile Arg Gln Ala Glu Ala Arg Gln
695 700 705

Glu Ala Ala Glu Ser Asn Arg Glu Arg Gly Gln Gly Gln Glu Pro
710 715 720

Val Gly Ser Gln Glu His Ala Ser Thr Ala Ser Leu Thr Leu Ile
725 730 735

4210> 75

4211> 483

4212> DNA

4213> Homo sapiens

4220>

4221> unsure

4222> 88, 94, 143, 156, 163, 179, 193, 369, 371, 381, 398, 473

4223> unknown base

4490> 75

tttccaaagggt ttctgggatgg cagatgattt tgggggttttg cattgttttc 50

ctgacataga aaacaaaaca gttttggggg ttccaggaggg gaantccagc 100

ctaccagga agttttgcaga aacagtgcac ggaagggcag ganttcctgg 150

tttagntttt tgntaaaaca tggacatgnt ccagtgtctg tontgagaga 200

gttagcaggtt accacttttg gcaggcccca ggcctgcagc aaggaggaag 250

agagctcaaa agttttggcct ttccctgagc ctccacagca gtggggggaga 300

agcaagggtt gggcccagtg tccccttttc ccagtgcac ctcagccttg 350

gcagccttga taactggtnt ntggctgcac nttaatgctn tgatatggt 400

tttagcattt attatatgaa aatagcaggg ttctagtttt taatttatca 450

gaagccctgc caccatttc atntccatcc aag 483

4210> 76

4211> 27

4212> DNA

4213> Artificial Sequence

4220>

4223> Synthetic oligonucleotide probe

4490> 76

gtctcagcac gtgtttctggt ctccagg 27

4210> 77

4211> 18

4212> DNA

4213> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<Q220> 78

caatagratg tgcacggc 18

<Q220> 78

<Q220> 18

<Q220> DNA

<Q220> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<Q220> 78

ctactgacg atgggcac 18

<Q220> 78

<Q220> 18

<Q220> DNA

<Q220> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<Q220> 78

caatgggcac ctcccttc 18

<Q220> 80

<Q220> 26

<Q220> DNA

<Q220> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<Q220> 80

ctctagactg gtctccagt cctccc 26

<Q220> 81

<Q220> 24

<Q220> DNA

<Q220> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<Q220> 81

ctctatggtg actctgcagc ttcc 24

<Q220> 81

<Q220> 18

<Q220> DNA

<Q220> Artificial Sequence

<Q220>

<Q220> Synthetic oligonucleotide probe

<400> 82
cttgcctggg aagagtttg 19

<210> 83
<211> 50
<212> DNA
<213> Artificial Sequence

<200>
<220> Synthetic oligonucleotide probe

<400> 83
gtgtaaacaa cagatacaaa ctcttccag cgaagaagct gaaaagcgtc 50

<210> 84
<211> 1714
<212> DNA
<213> Homo sapiens

<400> 84
catcctgcac catgggtgaaa ccacgcctgg ctaattttgt tgtatttttg 50
ctcagagatgg gatttcacag tgttagccag gattgtctca atctgaactc 100
atgatcggcc cgcctcggcc tcccaaaagt ctgggattac aggcgagtgcc 150
aacacacccc ggccacaaa tttttaagaa gttaatgaaa ccataccttt 200
tactttttta atgacaggaa aatgctcaca ataattgta acccaaaatt 250
ctggatacaa aagtacaato tttacttgt aaatacatgt atatgtacta 300
tatgaaaata taccaaatat caataatact tactctcggg taaaaaactc 350
ttctcatacc ctgggctaac aacttttaac aaaaaatttg catcaatttt 400
aagaatcgaag aaaaatttct gaaggtcata tgggacagaa aaaaaaacca 450
agggaanaat caccgcactt gggaaaaaaa gattcgaaat ctgccttttt 500
atagatttgt aattaataag gtccaggctt cctaagcaac ctaaatgttt 550
tgtttcgaaa caaagtaact gtctggatgt aggaggaaag ggagtgatgt 600
cactgcactt atgatgcacc ttgaatataa gacctactt gctatctccc 650
ctgcaccaga caggagccac ccactctcca gcacactgag cagcaagctg 700
aacacaagga acactgaccc aaatgggtaa ggggatggtg gggatgtcca 750
ttctgggtct gctactcttg gggctgctcc taccggtgca ggtttcttca 800
tttjtccctt taaccagtat gcgggaagct actgcagccg aaaccacaaa 850
gcctccaac agtgcctac agcctacagc cggctcctt gtggctttgc 900

ttgcctttct acatctctac cattaagagg caggtcaaga aacagctaca 950
 gttctccaac ccatacacta aaacccaato caaatggtgc ctagaagttc 1000
 aatgttgcaa ggaaaaaaac caggtcttca ccaaatctac taatttcaact 1050
 ccttattaac agagaaaagg ttgagagttc caaactggac tggtttaaag 1100
 agcatctgaa ggatttgact agatgataaa tgcctgtact ccagttactt 1150
 tgggaggcct aggcgggggg atcactgag gtcaggagtt tgagactaac 1200
 ctggccaaaa tggtgaaacc ccactgtac caaaaatata aatattgact 1250
 gggcgttggt gtaggtgctt gtgacccag ctactcaggt ggtgaagca 1300
 ggacaatcac ttgaactcag gaggcagagg ttgcagttag ctgagatcgc 1350
 gctactgcac tctagcctag cctgggcaac agagttagac ttgtctcaa 1400
 aaaaaaaaaa gccaagtga gtggctcag cctgtaatcc cggcactttg 1450
 ggaggccgag gtggggggat cagaggtca ggagatcaag accatcctgg 1500
 ctaatacagt gaaacctgt ctctactaaa aatacaaaaa attagccggg 1550
 gatggtggca ggcacctgga gtcccagcta ctggggagga tgaggcagga 1600
 gaatagcgtg aactcaggag ggcgagcttg cagttagccg agattgcgt 1650
 actgcactcc agcctgggag acagcgcgag actcgtctc aaaaaaaaaa 1700
 aaaaaaaaaa aaaa 1714

<210> 85

<211> 67

<212> PRT

<213> Homo sapiens

<400> 85

Met	Gly	Lys	Gly	Met	Val	Ala	Met	Leu	Ile	Leu	Gly	Leu	Leu	Leu
1				5				10					15	

Leu	Ala	Leu	Leu	Leu	Pro	Val	Gln	Val	Ser	Ser	Phe	Val	Pro	Leu
				20				25					30	

Thr	Ser	Met	Pro	Glu	Ala	Thr	Ala	Ala	Glu	Thr	Thr	Lys	Pro	Ser
				35				40					45	

Asn	Ser	Ala	Leu	Gln	Pro	Thr	Ala	Gly	Leu	Leu	Val	Val	Leu	Leu
				50				55					60	

Ala	Leu	Leu	His	Leu	Tyr	His
				65		

<210> 86

<211> 23

<112> DNA
<113> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 86
aggggacac tggatccaa atg 23

<110> 87
<111> 29
<112> DNA
<113> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
ggtagagatg tagaagggca agcaagacc 29

<110> 88
<111> 51
<112> DNA
<113> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
gtccctacc cgtgcagggt tcttcatttg ttctttaac cagtatgccg 50

<110> 89
<111> 2956
<112> DNA
<113> Homo sapiens

<400> 89
ggcggggga gagggggcc agcggggcg cgtggggc gggggagg 50
ggctctccc cgtgtgtgg cggggggcg gccctgaatg cgtgtgtgt 100
gtgtgtgtgt ggcctatggg ggggggggg ctggggggcc cggggggagg 150
ggggggggg ggggggggg gaagggggcc cggggggaga cggggaggac 200
ggacaggacc cgcacagcaa gcacctgtac acggcggaca tgttcacgca 250
cggggtacag agcggggcg accttgtcat gttcttcggc cctgtgtgtg 300
gacactgcaa ggggtgtcag ccgacttggg atgacctggg agacaaatat 350
aacagcatgg aagatgcaca agtctatgtg gctaaagtgg actgcaaggc 400
ccactccgac gtgtgtctcg ccaggggggt gcgaggatac ccaccttaa 450
agctttttcaa gccaggccaa gaagctgtga agtaccaggg tctcggggac 500

ttccagacac tggaaaaactg gatgctgcag acactgaacg aggagccagt 550
gacaccagag ccggaagtgg aaccgccacg tgcaccagag ctcaagcaag 600
ggctgtatga gctctcagca agcaactttg agctgcacgt tgcacaaggc 650
gaccaacttta tcaagttctt cgtctcgtgg tgtggtcact gcaaaagcct 700
ggctccaaac tgggagcagc tggctctggg ccttgaacat tccgaaaactg 750
tcaagattgg caaggttgat tgtacacagc actatgaact ctgctccgga 800
aaccaggctc tgggtctacc cactcttctc tgggtccgag atgggaaaaa 850
ggtggatcag tacaaggga agcgggattt ggagtcactg agggagtaac 900
tggagtccca gctgcagcgc acagagactg gagcgacgga gacgtcacc 950
cctcagagg ccgcggctgt ggcagctgag ccgagggctg acaagggcac 1000
tgtgtgggca ctcaactgaaa ataacttcga tgacaccatt gcagaaggaa 1050
taaccttcac caagttttat gctccatggc tgggtcattg taagaactctg 1100
gctcctactt gggaggaact ctctaaaaag gaattccctg gtctggcggg 1150
ggtcaagatc gcgaagtag actgcactgc tgaacggaat acctgcagca 1200
agtattcggc acgaggctac ccacgcttat tgcctttccg aggaggggaag 1250
aaagtcagtg agcacagtgg aggcagagac cctgactcgt tacaccgctt 1300
tgtcctgagc caagcgaaaag acgaacttta ggaacacagt tggaggtcac 1350
ctctcctgac cagctccgc accctgcgtt taggagttca gtcccacaga 1400
ggcactggg ttcccagtgg tggctgttca gaaagcagaa catactaagg 1450
gtgaggtacc ctctttgtgt gtgtgttttc caagccaaca cactctacag 1500
attctttatt aagttaagtt tctctaagta aatgtgtaac ctatggtcac 1550
tgtgtaaaaa ttttcagtgg cgatatatcc cctttgaact tctcttgatg 1600
aaatttacat ggtttccctt gagactaaaa tagcgttgag ggaaatgaaa 1650
tcgttggaat attgttggc cctgagttga gtgattttgg tgaagaaaag 1700
cacatccaaa gcatagttta cctgcaccag agttctggaa aggtgggcctt 1750
gtggcagtat tgaogttcct ctgattctaa ggtcacagtt gactcaatac 1800
tgtgttggtc cgtagcatgg agcagattga aatgcaaaaa ccacacacctc 1850
tggaagatac ctccacgggc gctgctggag cttctgttgc tgtgaatact 1900
tctctcagtg tgagaggtta gcctgatga aagcagcgtt acttctgacc 1950

gtgcctgagt aagagaatgc tgatgcacata accttatgtg tggatacttg 2700
 tcaaatcagt tactgttcag gggatccttc tgtttctcac ggggtgaaac 2750
 atgtcttttag ttctcctagt taacacgaag ccagagccca catgaactgt 2800
 tggatgtctt ccttagaaaag ggttaggcctg gaaaattcca ccaggctcat 2850
 tctcagtcac tcattaaactc attgaaagat ccagcttgta ttgttcacot 2900
 ggggtgacaa gaccagacag gctttccacg gcctgggtat ccagggaggg 2950
 tctgcagccc tcttgaaggg ccttaactag agttctagag ttctcgatto 3000
 tgtttctcag tagtcctctt agaggcttgc tatacttggt ctgcttcaag 3050
 gaggtcgacc tctaatgta tgaagaatgg gatgcatttg atctcaagac 3100
 caaagacaga tgcagtggg ctgctctggc cctgggtgtgc aaggctgtgg 3150
 cagctgttga tgcagtgct ctctaaactc tctgttcttc gtgattaaac 3200
 acctctatct ccttggggaa taagcacata caggcttaag ctctaagata 3250
 gataggtgtt tgtcctttta ccctcgagct acctccata ataaccactt 3300
 tgcctcacc acctctcacc cactcccat acccaagggg atgtggatac 3350
 ctggcccaaa gtaactgggt gtaggaatct tagaaaacag accacttata 3400
 ctgtctgtct gaggcagaag ataacagcag catctcgacc agctctctgc 3450
 tcaaggaaa tctttattaa tcaagtatgg ttcacagata attctttttt 3500
 taaaaaaacc caacctctc gagaaacaca actgtcaaga gtcttgtaca 3550
 cactaactca gctttgcctc accagctctg tcttcaaga aaatcaaaat 3600
 ggtacaattt gtttgtttac actatgatac tttctaaata aactcttttt 3650
 ttttaa 2956

<210> 90
 <211> 412
 <212> PRT
 <213> Homo sapiens

<400> 90
 Met Pro Ala Arg Pro Gly Arg Leu Leu Pro Leu Leu Ala Arg Pro
 1 5 10 15
 Ala Ala Leu Thr Ala Leu Leu Leu Leu Leu Gly His Gly Gly
 20 25 30
 Gly Gly Arg Trp Gly Ala Arg Ala Gln Gln Ala Ala Ala Ala
 35 40 45

Ala	Asp	Gly	Pro	Pro	Ala	Ala	Asp	Gly	Glu	Asp	Gly	Gln	Asp	Pro	
				53					55					59	
His	Ser	Lys	His	Leu	Tyr	Thr	Ala	Asp	Met	Phe	Thr	His	Gly	Ile	
				63					70					75	
Gln	Ser	Ala	Ala	His	Phe	Val	Met	Phe	Phe	Ala	Pro	Trp	Cys	Gly	
				80					85					90	
His	Cys	Gln	Arg	Leu	Gln	Pro	Thr	Trp	Asn	Asp	Leu	Gly	Asp	Lys	
				95					100					105	
Tyr	Asn	Ser	Met	Gln	Asp	Ala	Lys	Val	Tyr	Val	Ala	Lys	Val	Asp	
				110					115					120	
Cys	Thr	Ala	His	Ser	Asp	Val	Cys	Ser	Ala	Gln	Gly	Val	Arg	Gly	
				125					130					135	
Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Lys	Pro	Gly	Gln	Glu	Ala	Val	Lys	
				140					145					150	
Tyr	Gln	Gly	Pro	Arg	Asp	Phe	Gln	Thr	Leu	Glu	Asn	Trp	Met	Leu	
				155					160					165	
Gln	Thr	Leu	Asn	Gln	Glu	Pro	Val	Thr	Pro	Glu	Pro	Glu	Val	Gln	
				170					175					180	
Pro	Pro	Ser	Ala	Pro	Glu	Leu	Lys	Gln	Gly	Leu	Tyr	Glu	Leu	Ser	
				185					190					195	
Ala	Ser	Asn	Phe	Glu	Leu	His	Val	Ala	Gln	Gly	Asp	His	Phe	Ile	
				200					205					210	
Lys	Phe	Phe	Ala	Pro	Trp	Cys	Gly	His	Tys	Lys	Ala	Leu	Ala	Pro	
				215					220					225	
Thr	Trp	Glu	Gln	Leu	Ala	Leu	Gly	Leu	Glu	His	Ser	Glu	Thr	Val	
				230					235					240	
Lys	Ile	Gly	Lys	Val	Asp	Cys	Thr	Gln	His	Tyr	Glu	Leu	Cys	Ser	
				245					250					255	
Gly	Asn	Gln	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Trp	Phe	Arg	Asp	
				260					265					270	
Gly	Lys	Lys	Val	Asp	Gln	Tyr	Lys	Gly	Lys	Arg	Asp	Leu	Glu	Ser	
				275					280					285	
Leu	Arg	Glu	Tyr	Val	Glu	Ser	Gln	Leu	Gln	Arg	Thr	Glu	Thr	Gly	
				290					295					300	
Ala	Thr	Glu	Thr	Val	Thr	Pro	Ser	Glu	Ala	Pro	Val	Leu	Ala	Ala	
				305					310					315	
Glu	Pro	Glu	Ala	Asp	Lys	Gly	Thr	Val	Leu	Ala	Leu	Thr	Glu	Asn	
				320					325					330	

Asn Phe Asp Asp Thr Ile Ala Glu Gly Ile Thr Phe Ile Lys Phe
335 340 345

Tyr Ala Pro Trp Cys Gly His Cys Lys Thr Leu Ala Pro Thr Trp
350 355 360

Glu Glu Leu Ser Lys Lys Glu Phe Pro Gly Leu Ala Gly Val Lys
365 370 375

Ile Ala Glu Val Asp Cys Thr Ala Glu Arg Asn Ile Cys Ser Lys
380 385 390

Tyr Ser Val Arg Gly Tyr Pro Thr Leu Leu Leu Phe Arg Gly Gly
395 400 405

Lys Lys Val Ser Glu His Ser Gly Gly Arg Asp Leu Asp Ser Leu
410 415 420

His Arg Phe Val Leu Ser Gln Ala Lys Asp Glu Leu
425 430

<210> 31

<211> 37

<212> DNA

<213> Artificial Sequence

<210>

<213> Synthetic oligonucleotide probe

<410> 21

atgttcttgg cgccttggtg 20

<410> 30

<411> 31

<412> DNA

<413> Artificial Sequence

<410>

<413> Synthetic oligonucleotide probe

<410> 21

ccagagccaac acactctaca g 21

<410> 33

<411> 34

<412> DNA

<413> Artificial Sequence

<410>

<413> Synthetic oligonucleotide probe

<410> 30

aaaggatcgc cttgtgcaac gtgc 24

<410> 34

<411> 23

4212 DNA
4213 Artificial Sequence

4221
4222 Synthetic oligonucleotide probe

4201 94
tggtcaaaggg gatatatggc cac 23

4210 95
4211 44
4212 DNA
4213 Artificial Sequence

4220
4221 Synthetic oligonucleotide probe

4200 95
gcatggaaga tgcacaagtc tatgtggtta aagtggactg cacggacca 49

4210 96
4211 1016
4212 DNA
4213 Homo sapiens

4200 96
ttttctgag gaaccacagc aatgaatggc ttgcatcct tgccttgaag 50
aaaccattt atcctcctgg tactattctt ttgcaaatc cagagtctgg 100
ctctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacaca 150
atttcaccag gaaccaaaagg agatgatggt gaaaaaggag atccaggaga 200
agagggaag catgggcaag tgggacgcat ggggcccga a ggaattaaag 250
cagaactggg tgatatggga gatcagggca atattggcaa gactggggcc 300
attgggaga agggcgacaa aggggaaaaa ggtttgcttg gaatacctgg 350
agaaaaaggg aaagcaggtt ctgtctgtga ttgtggaaga tacgggaaat 400
ttgttgacaa actggatatt agtattgctc ggctcaagac atctatgaag 450
ttgttcacaa atgtgatagc agggattagg gaaactgaag agaaattcta 500
ctacatgttg caggaagaga agaactacag ggaatcccta acccaactga 550
gaattctggg tggaatgcta gccatgccca aggatgaagc tgccaacaca 600
ctcctccttg actatgttgc caagagtggc ttctttcggg tgttcattgg 650
cttcaatgac cttgaaaggg agggacagta catgtccaca gacaacactc 700
cactgcagaa ctatagcaac tggaatgagg gggaaccacg cgacccttat 750
ggctatgagg actgtgtgga gatgctgagc tctggcagat ggaatgacac 800

agaatgcaat cttaccatgt acattgtctg tgagttcacc aagaagaaaa 855
 agtcaattcc ctcatctac gtatttgata tttctgtgt accgtcatta 905
 cagttattgt tatccatcct ttttttctg attgtactac attgatctg 955
 agtcaacata gctagaaaaat gctaaactga ggtatggagg ctccatcacc 1000
 aaaaaaaaaa aaaaaa 1016

4210: 97
 4211: 277
 4212: PRT
 4213: Homo sapiens

4403: 97
 Met Asn Gly Phe Ala Ser Leu Leu Arg Arg Asn Gln Phe Ile Leu
 1 5 10 15
 Leu Val Leu Phe Leu Leu Gln Ile Gln Ser Leu Gly Leu Asp Ile
 20 25 30
 Asp Ser Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser
 35 40 45
 Pro Gly Pro Lys Gly Asp Asp Gly Glu Lys Gly Asp Pro Gly Glu
 50 55 60
 Glu Gly Lys His Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile
 65 70 75
 Lys Gly Glu Leu Gly Asp Met Gly Asp Gln Gly Asn Ile Gly Lys
 80 85 90
 Thr Gly Pro Ile Gly Lys Lys Gly Asp Lys Gly Glu Lys Gly Leu
 95 100 105
 Leu Gly Ile Pro Gly Glu Lys Gly Lys Ala Gly Thr Val Cys Asp
 110 115 120
 Cys Gly Arg Tyr Arg Lys Phe Val Gly Gln Leu Asp Ile Ser Ile
 125 130 135
 Ala Arg Leu Lys Thr Ser Met Lys Phe Val Lys Asn Val Ile Ala
 140 145 150
 Gly Ile Arg Glu Thr Glu Glu Lys Phe Tyr Tyr Ile Val Gln Glu
 155 160 165
 Glu Lys Asn Tyr Arg Glu Ser Leu Thr His Cys Arg Ile Arg Gly
 170 175 180
 Gly Met Leu Ala Met Pro Lys Asp Glu Ala Ala Asn Thr Leu Ile
 185 190 195
 Ala Asp Tyr Val Ala Lys Ser Gly Phe Phe Arg Val Phe Ile Gly

200	205	210
Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Met Ser Thr Asp Asn		
215	220	225
Thr Pro Leu Gln Asn Tyr Ser Asn Trp Asn Glu Gly Glu Pro Ser		
230	235	240
Asp Pro Tyr Gly His Glu Asp Cys Val Glu Met Leu Ser Ser Gly		
245	250	255
Arg Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Cys		
260	265	270
Glu Phe Ile Lys Lys Lys Lys		
275		

<210> 3'
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<230> 23
 aggtgactat gttgccaaga gtgg 24

<240> 24
 <241> 24
 <242> DNA
 <243> Artificial Sequence

<250>
 <253> Synthetic oligonucleotide probe

<260> 23
 gatgatggag gctccatacc tcag 24

<270> 100
 <271> 50
 <272> DNA
 <273> Artificial Sequence

<280>
 <283> Synthetic oligonucleotide probe

<290> 100
 ggtgtcattg gcgtgaatga ccttgaaagg gagggacagt acatgttcac 50

<300> 101
 <301> 2174
 <302> DNA
 <303> Homo sapiens

<400> 101
 gggtctatcg attcgaattc ggccacactg gccggatcct ctagagatcc 50

ctcgacctcg acccaacgcgt ccgctgctct ccgcccgtgt ggagtgggtg 100
gggctgggtt gggaatgggc gtgtgacgc gcacgggggc cccctggaag 150
gagaagtctc agctagaacg agcggcccta ggtttttcga agggaggatc 200
agggatgttt gcgagcggct ggaaccagac ggtgcgcata gaggaagcgg 250
gctccatggc tgcctcctcg ctgctgcctc tctgtctgtt gctaccgctg 300
ctgtgtgtga agctacacct ctggccgcag ttgggtgtgg ttccggggga 350
cttggccttt ggggtgcag ctctgtctg caaaagggtt cttcgagctc 400
gggccttggc cggggctgac gcgcacccgg aaggctccga ggggggtgac 450
agcctggcct gggcctcgc ggaactggcc cagcagcgc ccggcacac 500
ctttctcatt cagggtctgc ggcgccttag ctactcagag ggggaggcgc 550
agagtaacag ggttgcacgc gcttccctac gtgggttagg ctgggaactg 600
ggacccgcag ggggcgacag cggcga-ggg agcgttggag aaggcgagcg 650
ggcagcgcgc ggagccggag atgcagcggc cgggaagcgg ggggagtctg 700
ccggagggga cggtcgcgc agaggtggag ggcgcgcgc cctctgtca 750
cctggagcaa ctgtggcgct gctcctcccc gctggccac agttctctg 800
gctctggctc gggctggcca aggcgggct ggcacctgac ttctgcccc 850
ccgcctcgc ccggggcccc ctgctgcact gctccgcag ctggggcgcg 900
cggcgctgg ttgtggcgcc agagtthctg gagtccctgg agccggacct 950
gcgcgcctc agagccatgg ggtccacct gtgggtgtca ggcacaggaa 1000
cccacctgc tgggaattagc gatttgcctg ctgaagtgtc cgttgaagtg 1050
gatggggcag tgcagggata cctctcttcc ccccagagca taacagacac 1100
gtgcctgtac atcttcacct ctggcaccc cgggcctcccc aaggctgctc 1150
ggatcagtc tctgaagatc ctgcaatgac aggtcttcta tcagctgtgt 1200
ggtgtccacc aggaagatgt gattctacctc gcctccccc tctaccacat 1250
gtccgggttc ctgtgggca tctggggctg catgggcatt ggggcacacg 1300
tggctgtgaa atccaagtcc tggctggct agttctggga agattgccag 1350
cagcacaggg tgaagggtgt ccagtaacat ggggagctgt gcgcatacct 1400
tgtcaaccag ccccgcagca aggcagaacg tggccataag gtcgggctgg 1450

cagtgggcag cggggtgggc ccagatacct gggagcgttt tgtggggcgc 1500
 ttggggcccc tgcaggtgct ggagacatat ggactgacag agggcaacgt 1500
 ggccaccatc aactacacag gacagggggg cgtgtgggg cgtgcttccc 1600
 ggttttaca gcatatcttc cctttctctc tgattcgcta tgatgtccc 1650
 acaggagagc caattcggga ccccccaggg cactgtatgg ccacatctcc 1700
 aggtgagcca gggctgtctg tggccccggc aagccagcag tccccattcc 1750
 tgggttatgc tggggggcca gagctggccc aggggaagtt gctaaaggat 1800
 gtcttcgggc ctggggatgt tttcttcaac actggggacc tgttggtctg 1850
 cgatgacca ggtttctctc gcttcacatg tctactgga gacaccttca 1900
 ggtggaaggg ggagaatgtg gccacaaccc aggtggcaga ggtcttcgag 1950
 gccctagatt ctcttcagga ggtgaaagtc tatggagtca ctgtgcccag 2000
 gcctgaaggg agggctggaa tggcagccct agttctgggt cccccccacg 2050
 ctctggacct tatgcagctc tacaccaacg tgtctgagaa ctgcccacct 2100
 tatgcccggc ccagattccc caggctccag gactcttgg ccaccacaga 2150
 gaccttcaaa cagcagaaa gttggatggc aaatgagggc ttgcacccca 2200
 gccacctgtc tgcaccactg taagtctctg accaggctgt aggtgcttac 2250
 ctgcccctca caactgcctg gtacagggcc ctcttggcag gaaaccttcg 2300
 aatctgagaa ctctccacac tgaggccact gagagaggaa ctctgtgggg 2350
 tggggggcgt tgcaggtgta ctgggctgtc agggatcttt tctataccag 2400
 aactggcgtc actattttgt aataaatgtg gctggagctg atccagctgt 2450
 ctctgaccta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gggggccggc 2500
 actctagagt ccacctgcag tagggataac agggtaataa gcttggccgc 2550
 catggcccaa ctgtttatt gcag 2574

<310> 102
 <311> 730
 <312> PRT
 <313> Homo sapiens

<400> 102
 Met Gly Val Cys Gln Arg Thr Arg Ala Pro Trp Lys Gln Lys Ser
 1 5 10 15
 Gln Leu Glu Arg Ala Ala Leu Gly Phe Arg Lys Gly Gly Ser Gly
 20 25 30

Met	Phe	Ala	Ser	Gly	Trp	Asn	Gln	Thr	Val	Pro	Ile	Glu	Glu	Ala	35	40	45
Gly	Ser	Met	Ala	Ala	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu	50	55	60
Pro	Leu	Leu	Leu	Leu	Lys	Leu	His	Leu	Trp	Pro	Gln	Leu	Arg	Trp	65	70	75
Leu	Pro	Ala	Asp	Leu	Ala	Phe	Ala	Val	Arg	Ala	Leu	Cys	Cys	Lys	80	85	90
Arg	Ala	Leu	Arg	Ala	Arg	Ala	Leu	Ala	Ala	Ala	Ala	Asp	Pro		95	100	105
Glu	Gly	Pro	Glu	Gly	Gly	Cys	Ser	Leu	Ala	Trp	Arg	Leu	Ala	Glu	110	115	120
Leu	Ala	Gln	Gln	Arg	Ala	Ala	His	Thr	Phe	Leu	Ile	His	Gly	Ser	125	130	135
Arg	Arg	Phe	Ser	Tyr	Ser	Glu	Ala	Glu	Arg	Glu	Ser	Asn	Arg	Ala	140	145	150
Ala	Arg	Ala	Phe	Leu	Arg	Ala	Leu	Gly	Trp	Asp	Trp	Gly	Pro	Asp	155	160	165
Gly	Gly	Asp	Ser	Gly	Glu	Gly	Ser	Ala	Gly	Glu	Gly	Glu	Arg	Ala	170	175	180
Ala	Pro	Gly	Ala	Gly	Asp	Ala	Ala	Ala	Gly	Ser	Gly	Ala	Glu	Phe	185	190	195
Ala	Gly	Gly	Asp	Gly	Ala	Ala	Arg	Gly	Gly	Gly	Ala	Ala	Ala	Pro	200	205	210
Leu	Ser	Pro	Gly	Ala	Thr	Val	Ala	Leu	Leu	Leu	Pro	Ala	Gly	Pro	215	220	225
Glu	Phe	Leu	Trp	Leu	Trp	Phe	Gly	Leu	Ala	Lys	Ala	Gly	Leu	Arg	230	235	240
Thr	Ala	Phe	Val	Pro	Thr	Ala	Leu	Arg	Arg	Gly	Pro	Leu	Leu	His	245	250	255
Cys	Leu	Arg	Ser	Cys	Gly	Ala	Arg	Ala	Leu	Val	Leu	Ala	Pro	Glu	260	265	270
Phe	Leu	Glu	Ser	Leu	Glu	Pro	Asp	Leu	Pro	Ala	Leu	Arg	Ala	Met	275	280	285
Gly	Leu	His	Leu	Trp	Ala	Ala	Gly	Pro	Gly	Thr	His	Pro	Ala	Gly	290	295	300
Ile	Ser	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ala	Glu	Val	Asp	Gly	Pro	305	310	315

Val	Pro	Gly	Tyr	Leu	Ser	Ser	Pro	Gln	Ser	Ile	Thr	Asp	Thr	Cys	330	335	336
Leu	Tyr	Ile	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Leu	Pro	Lys	Ala	Ala	338	341	342
Arg	Ile	Ser	His	Leu	Lys	Ile	Leu	Gln	Cys	Gln	Gly	Phe	Tyr	Gln	350	351	353
Leu	Cys	Gly	Val	His	Gln	Glu	Asp	Val	Ile	Tyr	Leu	Ala	Leu	Pro	361	370	373
Leu	Tyr	His	Met	Ser	Gly	Ser	Leu	Leu	Gly	Ile	Val	Gly	Cys	Met	380	381	382
Gly	Ile	Gly	Ala	Thr	Val	Val	Leu	Lys	Ser	Lys	Phe	Ser	Ala	Gly	395	400	403
Gln	Phe	Trp	Glu	Asp	Cys	Gln	Gln	His	Arg	Val	Thr	Val	Phe	Gln	410	415	420
Tyr	Ile	Gly	Glu	Leu	Cys	Arg	Tyr	Leu	Val	Asn	Gln	Pro	Pro	Ser	425	430	435
Lys	Ala	Glu	Arg	Gly	His	Lys	Val	Arg	Leu	Ala	Val	Gly	Ser	Gly	440	445	450
Leu	Arg	Pro	Asp	Thr	Trp	Glu	Arg	Phe	Val	Arg	Arg	Phe	Gly	Pro	455	460	465
Leu	Gln	Val	Leu	Glu	Thr	Tyr	Gly	Leu	Thr	Glu	Gly	Asn	Val	Ala	470	475	480
Thr	Ile	Asn	Tyr	Thr	Gly	Gln	Arg	Gly	Ala	Val	Gly	Arg	Ala	Ser	485	490	495
Trp	Leu	Tyr	Lys	His	Ile	Phe	Pro	Phe	Ser	Leu	Ile	Arg	Tyr	Asp	500	505	510
Val	Thr	Thr	Gly	Glu	Pro	Ile	Arg	Asp	Pro	Gln	Gly	His	Cys	Met	515	520	525
Ala	Thr	Ser	Pro	Gly	Glu	Pro	Gly	Leu	Leu	Val	Ala	Pro	Val	Ser	530	535	540
Gln	Gln	Ser	Pro	Phe	Leu	Gly	Tyr	Ala	Gly	Gly	Pro	Glu	Leu	Ala	545	550	555
Gln	Gly	Lys	Leu	Leu	Lys	Asp	Val	Phe	Arg	Pro	Gly	Asp	Val	Phe	560	565	570
Phe	Asn	Thr	Gly	Asp	Leu	Leu	Val	Cys	Asp	Asp	Gln	Gly	Phe	Leu	575	580	585
Arg	Phe	His	Asp	Arg	Thr	Gly	Asp	Thr	Phe	Arg	Trp	Lys	Gly	Glu	590	595	600

Asn Val Ala Thr Thr Glu Val Ala Glu Val Phe Glu Ala Leu Asp		
605	610	615
Phe Leu Gln Glu Val Asn Val Tyr Gly Val Thr Val Pro Gly His		
620	625	630
Glu Gly Arg Ala Gly Met Ala Ala Leu Val Leu Arg Pro Pro His		
635	640	645
Ala Leu Asp Leu Met Gln Leu Tyr Thr His Val Ser Glu Asn Leu		
650	655	660
Pro Pro Tyr Ala Arg Pro Arg Phe Leu Arg Leu Gln Glu Ser Leu		
665	670	675
Ala Thr Thr Glu Thr Phe Lys Gln Gln Lys Val Arg Met Ala Asn		
680	685	690
Glu Gly Phe Asp Pro Ser Thr Leu Ser Asp Pro Leu Tyr Val Leu		
695	700	705
Asp Gln Ala Val Gly Ala Tyr Leu Pro Leu Thr Thr Ala Arg Tyr		
710	715	720
Ser Ala Leu Leu Ala Gly Asn Leu Arg Ile		
725	730	

<110> 103
 <111> 22
 <112> DNA
 <113> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 103
 gagagccatg gggctccacc tg 12

<110> 104
 <111> 18
 <112> RNA
 <113> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 104
 uuagaatgtg gccacaac 18

<110> 105
 <111> 20
 <112> RNA
 <113> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 105
gacatggac agtgactaca tagacg 26

<410> 106
<411> 1:
<412> DNA
<413> Artificial Sequence

<420>:
<423> Synthetic oligonucleotide probe

<400> 106
atcacatca gaggacac 18

<410> 107
<411> 4:
<412> DNA
<413> Artificial Sequence

<420>:
<423> Synthetic oligonucleotide probe

<400> 107
caatggacg gatactctc tccccccag agcataacag acacg 45

<410> 108
<411> 2979
<412> DNA
<413> Homo sapiens

<400> 108
cctgtgttaa gctgaggttt cccctagata cgttatatcc caaacacata 50
cctccacgca cacacatccc caagaacctc gagctcacac caacagacac 100
acggcgccat acacactcgc tctcgtttgt ccctctccct ccggggggag 150
ccggcgccgc cccccacctt tggcgacac ccggcgagc cgagcccgca 200
gggtccagg attctgggga cgggaactcg gattgcagct ctgaaccccc 250
atggtgtttt tttaaacact ccttttccct ccttccctcg ttctgattgc 300
acggtttcca tctggggggt agaggagcaa ggcagcagcc ttcccagcca 350
gcccctgttg gcttgccatc gtccatctgg ctataaaaag tctgctgagc 400
gcagtcacga gggctgcgct gctcgtcccc cgggtcggca gaaggggggtg 450
acgctgggca gggcgagga ggcgcgcgct gctctggcg ggctttcggc 500
ctgaggcgca aggtgaagag cgcacccggc gtgggggtta ccgagctgga 550
tttgtatgtt gcacctgac ttcttggatc ggggtgtgta ttcttccct 600
cttggggctg ctgctctccc tccccgcgg ggcggtgtg aaggtcggc 650

gotggggaga ggtoogooag gogtaoggtg ooaagggatt cagootggcg 700
 gacatoooot accaggagat ogcaggggaa cacttaagaa totgtootca 750
 ggaatatata tgotgaccca cagaaatgga agacaagtta agccaacaaa 800
 gcaaaactoga atttgaaaaa ottgtggaag agacaagcca ttttgtggcg 850
 accacttttg tgtocaggca taagaaattt gacgaatttt tocgagagot 900
 ootggagaat gcagaaaagt cactaaatga tatgttttga cggacotatg 950
 goatgotgta catgcagaat tcagaagtct tocaggacot ottcacagag 1000
 ctgaaaaggt actacactgg gggtaatgtg aatctggagg aaatgotcaa 1050
 tgacttttgg gotgggoooo tggaaaggat gtttcagctg ataaaacotto 1100
 agtatcaott cagtgaagac taootggaaat gtgtgagcaa atacactgac 1150
 cagotcaagc catttggaga cgtgooooog aaactgaaga ttcaggttac 1200
 ooggoootto attgotgcca ggacotttgt ccaggggctg actgtgggca 1250
 gagaagttag aaaccgagct tccaaggtca gcccaccccc aggggtgtatc 1300
 cgtgoooooa tgaagatgot gtactgocca taotgtoggg ggottccac 1350
 tgtgaggooo tgcaacaact actgtotcaa cgtcatgaag ggotgotttg 1400
 caaatcaggo tgacotogac acagagtggc atctgtttat agatgcaatg 1450
 otottgggtg cagagogaot ggagggggca tccaacattg agtcggtcat 1500
 ggacocgata gatgtcaaga tttctgaagc cattatgaac atgcaagaaa 1550
 acagcatgca ggtgtctgca aaggtcttto agggatgtgg tcagcccaaa 1600
 ootgotccag ootocagatc tgcocgotta gctootgaaa attttaatat 1650
 acgtttcagg ootacaatc ctgaggaaaag accaacaact gotgcaggca 1700
 caagotttga ooggotggto acagacataa aagagaaaatt gaagctctct 1750
 aaaaaggtct ggtcagcatt accctacact atctgcaagg acgagagcgt 1800
 gacagogggg acgtccaaag agggaggaatg ctggaaaggg cacagcaaaag 1850
 ccagataact goctgagatc atgaatgatg ggtccacca cccagatcaac 1900
 aatcccgagg tggatgtgga catcactcgg ootgacactt tcatcagaca 1950
 gcagattatg gotctccgtg tgatgaccaa caaactaaaa aacgootaca 2000
 atggcaatga tgtcaatttc caggacacaa gtgatgaatc cagtggctca 2050

gggagtgga ggggggcat ggatgacgtg tgtccacgg agtttgagtt 2100
 tgtcacacaa gagggccccc cagtggatcc cgaacggaga gaggtggact 2150
 ttcttgagc ccagcgtggc cactccctgc tctccgggtc tctcaactgc 2200
 atctgctgg cactgcagag actgtgcaga taatcttggg tttttggta 2250
 gatgaaaatg caatttagct atctgaatgg ccaactcaat ttttttcta 2300
 cactcttggc caatggacca tgcacaaaaa acttacggtt tctatgaga 2350
 agagagaggt aatgcaatct gctccctttt tggttttccc aaagagtacc 2400
 ggggtgcaga ctgaactgct tctctttccc ttcagctacc tggggggacc 2450
 ttgtttatcc tagagagaat tcttaactcaa atttttctga ccaggagatt 2500
 tcttaactct caatttgctt tatgtgcag aagttaagga atctacggtt 2550
 gtgagggttt tttttttctt atttaaaat 2579

<210> 109
 <211> 515
 <212> PRT
 <213> Homo sapiens

<200> 109
 Met Pro Ser Trp Ile Gly Ala Val Ile Leu Pro Leu Leu Gly Leu
 1 5 10 15
 Leu Leu Ser Leu Pro Ala Gly Ala Asp Val Lys Ala Arg Ser Cys
 20 25 30
 Gly Glu Val Arg Gln Ala Tyr Gly Ala Lys Gly Phe Ser Leu Ala
 35 40 45
 Asp Ile Pro Tyr Gln Glu Ile Ala Gly Gln His Leu Arg Ile Cys
 50 55 60
 Pro Gln Glu Tyr Thr Cys Cys Thr Thr Gln Met Glu Asp Lys Leu
 65 70 75
 Ser Gln Gln Ser Lys Leu Glu Phe Glu Asn Leu Val Glu Glu Thr
 80 85 90
 Ser His Phe Val Arg Thr Thr Phe Val Ser Arg His Lys Lys Phe
 95 100 105
 Asp Glu Phe Phe Arg Glu Leu Leu Glu Asn Ala Glu Lys Ser Leu
 110 115 120
 Asn Asp Met Phe Val Arg Thr Tyr Gly Met Leu Tyr Met Gln Asn
 125 130 135
 Ser Glu Val Phe Gln Asp Leu Phe Thr Glu Leu Lys Arg Tyr Tyr
 140 145 150

Thr Gly Gly Asn Val Asn Leu Glu Glu Met Leu Asn Asp Phe Trp	155	160	165
Ala Arg Leu Leu Glu Arg Met Phe Gln Leu Ile Asn Pro Gln Tyr	170	175	180
His Phe Ser Glu Asp Tyr Leu Glu Cys Val Ser Lys Tyr Thr Asp	185	190	195
Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys Leu Lys Ile Gln	200	205	210
Val Thr Arg Ala Phe Ile Ala Ala Arg Thr Phe Val Gln Gly Leu	215	220	225
Thr Val Gly Arg Glu Val Ala Asn Arg Val Ser Lys Val Ser Pro	230	235	240
Thr Pro Gly Cys Ile Arg Ala Leu Met Lys Met Leu Tyr Cys Pro	245	250	255
Tyr Cys Arg Gly Leu Pro Thr Val Arg Pro Cys Asn Asn Tyr Cys	260	265	270
Leu Asn Val Met Lys Gly Cys Leu Ala Asn Gln Ala Asp Leu Asp	275	280	285
Thr Glu Trp Asn Leu Phe Ile Asp Ala Met Leu Leu Val Ala Glu	290	295	300
Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val Met Asp Pro Ile	305	310	315
Asp Val Lys Ile Ser Glu Ala Ile Met Asn Met Gln Glu Asn Ser	320	325	330
Met Gln Val Ser Ala Lys Val Phe Gln Gly Cys Gly Gln Pro Lys	335	340	345
Pro Ala Pro Ala Leu Arg Ser Ala Arg Ser Ala Pro Glu Asn Phe	350	355	360
Asn Thr Arg Phe Arg Pro Tyr Asn Pro Glu Glu Arg Pro Thr Thr	365	370	375
Ala Ala Gly Thr Ser Leu Asp Arg Leu Val Thr Asp Ile Lys Glu	380	385	390
Lys Leu Lys Leu Ser Lys Lys Val Trp Ser Ala Leu Pro Tyr Thr	395	400	405
Ile Cys Lys Asp Glu Ser Val Thr Ala Gly Thr Ser Asn Glu Glu	410	415	420
Glu Cys Trp Asn Gly His Ser Lys Ala Arg Tyr Leu Pro Glu Ile	425	430	435

Met Asn Asp Gly Leu Thr Asn Gln Ile Asn Asn Pro Glu Val Asp		
440	445	450
Val Asp Ile Thr Arg Pro Asp Thr Phe Ile Arg Gln Gln Ile Met		
455	460	465
Ala Leu Arg Val Met Thr Asn Lys Leu Lys Asn Ala Tyr Asn Gly		
470	475	480
Asn Asp Val Asn Phe Gln Asp Thr Ser Asp Glu Ser Ser Gly Ser		
485	490	495
Gly Ser Gly Ser Gly Cys Met Asp Asp Val Cys Pro Thr Glu Phe		
500	505	510
Glu Phe Val Thr Thr Glu Ala Pro Ala Val Asp Pro Asp Arg Arg		
515	520	525
Glu Val Asp Ser Ser Ala Ala Gln Arg Gly His Ser Leu Leu Ser		
530	535	540
Trp Ser Leu Thr Cys Ile Val Leu Ala Leu Gln Arg Leu Cys Arg		
545	550	555

c110: 110
 c111: 21
 c112: DNA
 c113: Artificial Sequence

c123:
 c123: Synthetic oligonucleotide probe

c400: 110
 caaggtgaca gggggacgt c 21

c110: 111
 c111: 24
 c112: DNA
 c113: Artificial Sequence

c123:
 c123: Synthetic oligonucleotide probe

c400: 111
 agacagttct ctgcagtgc cagg 24

c110: 112
 c111: 47
 c112: DNA
 c113: Artificial Sequence

c123:
 c123: Synthetic oligonucleotide probe

c400: 112
 gaatgctgga acgggcacag caaagccaga tacttgctg 40

4210 113
4211 4649
4212 DNA
4213 Homo sapiens

4400 113
gggacgggtg gggggacggg tgggcaaaag aactcggagt gccaaagcta 50
aatagtttag ctgagaaaaa gcacgcagtc tgcagcgctt ggcgcgggtg 100
ggcgaactac gcaaaagaca agggggctcc ggggggaacg ggcgcggggc 150
tagggacccg gctttgggct tcaggctccc tagcaggggg gaaaaggaat 200
tgttgcccgg agttctctgg gaggtggagg gagatcagga aacggctctt 250
tcctcacttc gcgcctctgt gactgtcggg gagattggca aacgcctagg 300
aaaggactgg ggaaaataga cctgggaaag tggagaaggt gatcaggagg 350
ccgttcacat acggcagttt atctgtctga tcagagccag acggcagcg 400
tcaccttcgc agttctctcc aggtgtgggg accgcaggac agacggccga 450
tcctgcgcgc ctccgtacca gcactcccag gaggtcaga ctcgctcccc 500
aacgtcaggg gcgctctggc caccgaaaag cctctgcac tctgattctc 550
aatctcctgc ttgggttttt cctccagaga acctctgggt ggagatatta 600
acctctctct tctctctctt cctgggtgga agctgctcta gggagggggg 650
aggaggagga gaaagtgaaa tctgtctggg aagagcgagc cctcctctgt 700
cttcgggagt cccatccatt aagccatcac ctctgggaaga ttaaaagtct 750
cggacatggg gacagctgag aggagaggag gattctctgc caggtggaga 800
gcttcacccg ctgtctgggt gcctgtctgc gccgcagcg ggcgcggggg 850
cgtgttcttc cgcgtggagt ctccactggg acctgagtga atggctccca 900
ggggctctgc ggggcacccg cctccgcctt ctccacaggc ctgtctctgt 950
cctggaaaga tctagcaat gggggcgctg gcaggattct ggatcctctg 1000
cctcctcact tatggttacc tgtcctgggg ccaggcctta gaagaggagg 1050
aagaaggggc cttactagct caagctggag agaaactaga gccacgaca 1100
acttcacat cccagcccca tctcatttct atcctagcgg atgacaggg 1150
atttagagat gtgggttacc acgcatctga gattaaaaca cctactcttg 1200
acaagctcgc tgcggaagga gttaaactgg agaactacta tgtccagcct 1250

atttgacac caticaggag tcagtttatt actggaaagt atcagataca 1390
 caccggactt caacattota tcataagacc taccacaacc aactgtttac 1395
 ctctggacaa tgcacaccta cctcagaaac tgaaggaggt tggatattca 1400
 acccatatgg tcggaaaatg gcacttgggt ttaacagaa aagaatgat 1405
 gcccacaga agaggatttg atacctttt tggttccctt ttgggaagtg 1410
 gggattacta tacacactac aaatgtgaca gtctgggat gtgtggctat 1415
 gacttgtatg aaaaagacaa tggctgctgg gactatgaca atggcatata 1420
 ctccacacag atgtacactc agagagtaca gcaaatctta gcttcacata 1425
 acccacaaaa gcttatattt ttatatactg cctatcaagg tgttcattca 1430
 ccactgcaag ctctgggcag gtatttcgaa cactacgat ccattatcaa 1435
 cataaacagg agaagatatg ctggcatgtt ctctgctta gatgaagcaa 1440
 tcaacaacgt gacattgggt ctaaagaact atggttctta taacaacaga 1445
 atttatattt actcttcaga taatggtygg cagcctacgg caggagggag 1450
 taactggctt ctcagaggtt gcaagggaac atattgggaa ggagggatcc 1455
 gggctgtagg ctctgtgat agccacttc tgaanaacaa gggaacagtg 1460
 tctaagggaac ttgtgcacat cactgaactg taccacactc tcatttcact 1465
 ggtgaagga cagattgatg aggcattca actagatggc tatgatattc 1470
 gggagacat aagtgaggggt ctctgctcac ccgagtga tatcttgcac 1475
 aacattgacc cctatacacc aaggcaaaaa atggctcttg ggcagcaggg 1480
 tatgggatcc ggaacactgc aatccagtcg gccatcagag tgcagcaactg 1485
 gaaattgctt acaggaaatc ctggctacag cgaactgggtc cccctcagc 1490
 ctctcagcaa cctgggaccc aacggtyggc acaatgaac gatcaccttg 1495
 tcaactggca aaagtgtatg gcttttcaac atcacagccg acccatatga 1500
 gaggttggac ctatctaacg ggtatccagg aatcgtgaag aagctcctac 1505
 ggaggctctc acagttcaac aaaactgcag tgcgggtcag gtatccccc 1510
 aaagacccca gaagtaaccc taggtctaat ggaggggtct ggggaccatg 1515
 gtataaagag gaaaccaaga aaaagaagcc aagcaaaaat caggctgaga 1520
 aaaagcaaaa gaaaagcaaa aaaaagaaga agaaacagca gaaagcagtc 1525
 tcaggtaaac cagcaaatct ggctcgataa tctcgtggc ctaagcgtca 1530

ggcttggtttt catgctgtgc cactccagag acttctgcca cctggccgco 2750
acactgaaaa ctgtcctgct cagtgcacag gtgctaactct tgcaagccac 2800
aactagagag agtggagatg tttattttct cggctcctct agaaaaagtg 2850
gtgagtcctg agttccactg ctgtgcttca gccaactgac caaacactgc 2900
tttgaattat aggaggagaa caataaccta ccacccgcaa gcatgctaatt 2950
ctgatggaag ctacagggta gcatgattaa aactaccttt gataaattac 3000
agccaaagat cgtgtccact caaaggcctt gaagaatata ttttcttggt 3050
gaatttttgt atgtctgtca tatgacactt gggtttttta attaattcta 3100
ttttatatac ataaatatat gttcttttct ctgtgaaaag ctgtcttctct 3150
cacatgtgaa cagcttgca ctcattttac catgggtgag ggaatggcaa 3200
ataagaatgt ttgagcaca tgcccacaat gaatgtaact attttctaaa 3250
cactttacta gaagaacatt tcagtataaa aaacctaat tattttttaca 3300
gaaaaatatt ctgttctctt tataaaaagt catgcaaatg acttttattt 3350
ttatttctct cataccatta gaagaatttt atttcatttc ccbaatttat 3400
caagcactgt aatactataa attaatgtaa tactgtgtga attcagacta 3450
taaaaaacat cattccagaa actttataat cgtcattggt caatcaagat 3500
tttgaatgta ataagatgaa tatattcctt acaaattact tggaaattca 3550
atgtctgtgc agagttgaga caactttatt gtttctatca taaactattt 3600
atgtatctta attattaaaa tgatttaact tatggcacta gaaaatttac 3650
ctgggctttt ctgatctaac ttctagctaa aattgtatca ttggctctaa 3700
aaaaataaaa cttttactaa taggcaattg aaggaatggt ctgctaacaa 3750
ccacagtaat ataatatgat tttacagata gatgcttccc cttggctatg 3800
acatggagaa agattttccc ataataataa ctaatatcca tattaggttg 3850
gtgcaaaact agttgpggtt tttccatta aaagtaataa ccttactctt 3900
atacaaagtg gacactgttg ggagatacag agaaatggaa gatacggatc 3950
ctgcttgag taggtaacct tgcttggaac cccacatgc aaacgtcatg 4000
aggagaatta aaggagtatt atcagtaatg aagtttatca tgggtcatca 4050
atgagcatag attggtgtgg atctgtaga cctggtgtt ttctttgaag 4100

tgcctctctcc taatgcagag gccttgaagc ttacagtata cacttgaaaa 4150
 gtccacagata gctagaatta tgatctttga agttataact gtgatctgaa 4200
 aatgtgtgtg gtggtatgac agcataccat taaatacatt tacatcacag 4250
 ctcaaaggac tgtgatataa tccatttata tcacaactca aaggactgtg 4300
 atataatcca tttataacac agctcacagt tctgaaaat gtataaaaga 4350
 atctataate tagtactgaa attactaaat tgggtaagat gatttaaattg 4400
 attttaattt taacatctta tttctagaat atatggctcc attttatttt 4450
 atagtgtaaa gttgtatttc ctaaagtttg tgttttgtcg acagtatctt 4500
 ctcaatgagt cttaaaaata aaggcatatt gtccatgttt aaaaaaaaaa 4550
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4649

<Q110> 114
 <Q111> 515
 <Q112> PRT
 <Q113> Homo sapiens

<Q030> 114
 Met Ala Pro Arg Gly Cys Ala Gly His Pro Pro Pro Pro Ser Pro
 1 5 10 15
 Gln Ala Cys Val Cys Pro Gly Lys Met Leu Ala Met Gly Ala Leu
 20 25 30
 Ala Gly Phe Trp Ile Leu Cys Leu Leu Thr Tyr Gly Tyr Leu Ser
 35 40 45
 Trp Gly Gln Ala Leu Glu Gln Glu Glu Glu Gly Ala Leu Leu Ala
 50 55 60
 Gln Ala Gly Glu Lys Leu Glu Pro Ser Thr Thr Ser Thr Ser Gln
 65 70 75
 Pro His Leu Ile Phe Ile Leu Ala Asp Asp Gln Gly Phe Arg Asp
 80 85 90
 Val Gly Tyr His Gly Ser Glu Ile Lys Thr Pro Thr Leu Asp Lys
 95 100 105
 Leu Ala Ala Glu Gly Val Lys Leu Glu Asn Tyr Tyr Val Gln Pro
 110 115 120
 Ile Cys Thr Pro Ser Arg Ser Gln Phe Ile Thr Gly Lys Tyr Gln
 125 130 135
 Ile His Thr Gly Leu Gln His Ser Ile Ile Arg Pro Thr Gln Pro
 140 145 150

Asn Cys Leu Pro	Leu Asp Asn Ala Thr	Leu Pro Gln Lys Leu Lys	155	160	161
Glu Val Gly Tyr	Ser Thr His Met Val	Gly Lys Trp His Leu Gly	170	175	180
Phe Asn Arg Lys	Glu Cys Met Pro Thr	Arg Arg Gly Phe Asp Thr	185	190	195
Phe Phe Gly Ser	Leu Leu Gly Ser Gly	Asp Tyr Tyr Thr His Tyr	200	205	210
Lys Cys Asp Ser	Pro Gly Met Cys Gly	Tyr Asp Leu Tyr Glu Asn	215	220	225
Asp Asn Ala Ala	Trp Asp Tyr Asp Asn	Gly Ile Tyr Ser Thr Gln	230	235	240
Met Tyr Thr Gln	Arg Val Gln Gln Ile	Leu Ala Ser His Asn Pro	245	250	255
Thr Lys Pro Ile	Phe Leu Tyr Thr Ala	Tyr Gln Ala Val His Ser	260	265	270
Pro Leu Gln Ala	Pro Gly Arg Tyr Phe	Glu His Tyr Arg Ser Ile	275	280	285
Ile Asn Ile Asn	Arg Arg Arg Tyr Ala	Ala Met Leu Ser Cys Leu	290	295	300
Asp Glu Ala Ile	Asn Asn Val Thr Leu	Ala Leu Lys Thr Tyr Gly	305	310	315
Phe Tyr Asn Asn	Ser Ile Ile Ile Tyr	Ser Ser Asp Asn Gly Gly	320	325	330
Gln Pro Thr Ala	Gly Gly Ser Asn Trp	Pro Leu Arg Gly Ser Lys	335	340	345
Gly Thr Tyr Trp	Glu Gly Gly Ile Arg	Ala Val Gly Phe Val His	350	355	360
Ser Pro Leu Leu	Lys Asn Lys Gly Thr	Val Cys Lys Glu Leu Val	365	370	375
His Ile Thr Asp	Trp Tyr Pro Thr Leu	Ile Ser Leu Ala Glu Gly	380	385	390
Gln Ile Asp Glu	Asp Ile Gln Leu Asp	Gly Tyr Asp Ile Trp Glu	395	400	405
Thr Ile Ser Glu	Gly Leu Arg Ser Pro	Arg Val Asp Ile Leu His	410	415	420
Asn Ile Asp Pro	Tyr Thr Pro Arg Gln	Lys Met Ala Pro Gly Gln	425	430	435

Gln Ala Met Gly Ser Gly Thr Leu Gln Ser Ser Gln Pro Ser Glu
440 445 450

Cys Ser Thr Gly Asn Cys Leu Gln Glu Ile Leu Ala Thr Ala Thr
455 460 465

Gly Ser Pro Leu Ser Leu Ser Ala Thr Trp Asp Arg Thr Gly Gly
470 475 480

Thr Met Asn Gly Ser Pro Cys Gln Leu Ala Lys Val Tyr Gly Phe
485 490 495

Ser Thr Ser Gln Pro Thr His Met Arg Gly Trp Thr Tyr Leu Thr
500 505 510

Gly Ile Gln Glu Ser
515

<210> 115

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 115

cccaaccacaa ctgtttacac ctgg 24

<210> 116

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 116

ctctctgagt gtacatctgt gtgg 24

<210> 117

<211> 53

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<230>

<231> unsure

<232> GA

<233> unknown base

<400> 117

ggcaccctac ctcagaaact gaaggaggtt ggntattcaa cgcatatggt 50

egg 53

4210 - 118

4211 - 2260

4212 - DNA

4213 - Homo sapiens

4220 -

4221 - unsure

4222 - 2009, 2026, 2033, 2055, 2074, 2078, 2086

4223 - unknown base

4310 - 118

gggaaggcgtg ggtggcagtg gagggagga ccggaggggc tgaggagaga 50

ggaggggggc gcttagctgc taagggttcc ggccggggcc ctcccgaggg 100

gggtccagga ggaggaagga ggacccgtgc gagaatgctt ctgcccctgga 150

cccttggtct ccgctgctg ctctccctggg tggcaggttg ttccgggaac 200

ccgtccagtgc caaggcatca cgggttgtta gcctcggcac gtcagcctgg 250

gtctgtccac tatggaaact aactggcctg ctgctacggc tggagaagaa 300

acagcaaggg agtctgtgaa gctacatggc aacctggatg taagtcttggc 350

gagtggttgg gacaaaacaa atgcagatgc ttcccgaggc acacggggaa 400

aacctgcagt caagatgtga atgagtgttg aatgaaaccc cggccatgac 450

aacccagatg tctgaataca caccgaagct accagtgctt ttgcctcagt 500

ggccacatgc ccctgcacga tctacgtgt gtgaactcta ggacatgtgc 550

catataaac tctcagtaca gctgtgaaga caccagaagaa gggccacagt 600

gcccgtgttc atcctcagga ctccgcctgg ccccaaatgg aagagactgt 650

ctcagatctg atgaatgtgc ctctggtaaa gtcctctgtc cctacaatcg 700

aagttgtgtg aacacatttg gaagctaact ctgcacatgt cacctcggct 750

cggaaatgca atatctcagt ggaagatatg actgtataga tataaatgaa 800

tgtactatgg atagccatcc gtgcagccac catgccaatt gcttcaatac 850

ccaagggttc ttcaagtgtc aatgcaagca gggatataaa ggcaatggac 900

ttcgtgtgtc tgcctatcct gaaaattctg tgaagggaagt cctcagagca 950

cctggtaaca tcaagacag aatcaagaag ttgcttgctc acaaaaacag 1000

catgaaaaag aaggcaaaaa ttaaaaaatgt taccccagaa cccaccagga 1050

ctcctacccc taaggtgaac ttgcagccct tcaactatga agagatagtt 1100

tocagaggcg ggaactctca tggaggtaaa aaagggaatg aagagaaatg 1150
 aaagagggggc ttgaggatga gaaaagagaa gagaaagccc tgaagaatga 1200
 catagaggag cgaagcctgc gaggagatgt gtttttccct aaggtgaatg 1250
 aagpaggtga attcggcctg attctggctc aaaggaaaag gctaacttc 1300
 aaactggaac ataaagattt aaatatctcg gttgactgca gcttcaatca 1350
 tgggatctgt gactggaaaac aggatagaga agatgatttt gactggaatc 1400
 ctgctgatcg agataatgct attggcttct atatggcagt tccggccttg 1450
 gcaggctcaca agaaagacat tggccgattg aaacttctcc tactgaact 1500
 gcaacccccaa agcaactctt gtttgcctct tgattacggg ctggccggag 1550
 acaaaagtgg gaaacttoga gtgttttga aaaacagtaa caatgccttg 1600
 gcatgggaga agaccaagag tgaggatgaa aagtgggaag cagggaaaat 1650
 tcagtcttat caaggaaatg atgctaccaa aagcatcatt tttgaagcag 1700
 aagtgggcaa gggcaaaaac ggcgaaatcg cagtggatgg cgtcttgctt 1750
 gcttcaggct tatgtccaga tagcctttta ctctgttgatg actgaatgtc 1800
 actatcttta tatttgactt tgtatgtcag ttccctgggt ttttgatat 1850
 tgcacatag gactctggc attttagaat tactagctga aaaattgtaa 1900
 tglacaaaca gaaatattat tgtaagatgc ctctcttgta taagatatgc 1950
 caatatctgc tttaaatact atatcactgt atctctctag tcattctcga 2000
 atcttccnc attatattat aaaatnigga aangtcagtt tatctccct 2050
 cctcngtata ctgattttgt atangtngt tgatgngctt ctctctacaa 2100
 cattctcaga aaatagaaaa aaaagcacag agaaatgttt aactgctcga 2150
 ctcttatgat acttcttgga aactatgaca tcaaagatag acttttgcct 2200
 aagtggtcta gctgggtctt tcatagccaa acttgatat ttaattcttt 2250
 gtaataataa 2260

<210> 119
 <211> 338
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Pro Leu Pro Trp Ser Leu Ala Leu Pro Leu Leu Ser Trp
 1 5 10 15

Val	Ala	Gly	Gly	Phe	Gly	Asn	Ala	Ala	Ser	Ala	Arg	His	His	Gly	
				20					25					30	
Leu	Leu	Ala	Ser	Ala	Arg	Gln	Pro	Gly	Val	Cys	His	Tyr	Gly	Thr	
				35					40					45	
Lys	Leu	Ala	Cys	Cys	Tyr	Gly	Trp	Arg	Arg	Asn	Ser	Lys	Gly	Val	
				50					55					60	
Cys	Glu	Ala	Thr	Cys	Glu	Pro	Gly	Cys	Lys	Phe	Gly	Glu	Cys	Val	
				65					70					75	
Gly	Pro	Asn	Lys	Cys	Arg	Cys	Phe	Pro	Gly	Tyr	Thr	Gly	Lys	Thr	
				80					85					90	
Cys	Ser	Gln	Asp	Val	Asn	Glu	Cys	Gly	Met	Lys	Pro	Arg	Pro	Cys	
				95					100					105	
Gln	His	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Phe	Cys	
				110					115					120	
Leu	Ser	Gly	His	Met	Leu	Met	Pro	Asp	Ala	Thr	Cys	Val	Asn	Ser	
				125					130					135	
Arg	Thr	Cys	Ala	Met	Ile	Asn	Cys	Gln	Tyr	Ser	Cys	Glu	Asp	Thr	
				140					145					150	
Glu	Glu	Gly	Pro	Gln	Cys	Leu	Cys	Pro	Ser	Ser	Gly	Leu	Arg	Leu	
				155					160					165	
Ala	Pro	Asn	Gly	Arg	Asp	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Ala	Ser	
				170					175					180	
Gly	Lys	Val	Ile	Cys	Pro	Tyr	Asn	Arg	Arg	Cys	Val	Asn	Thr	Phe	
				185					190					195	
Gly	Ser	Tyr	Tyr	Cys	Lys	Cys	His	Ile	Gly	Phe	Glu	Leu	Gln	Tyr	
				200					205					210	
Ile	Ser	Gly	Arg	Tyr	Asp	Cys	Ile	Asp	Ile	Asn	Glu	Cys	Thr	Met	
				215					220					225	
Asp	Ser	His	Thr	Cys	Ser	His	His	Ala	Asn	Cys	Phe	Asn	Thr	Gln	
				230					235					240	
Gly	Ser	Phe	Lys	Cys	Lys	Cys	Lys	Gln	Gly	Tyr	Lys	Gly	Asn	Gly	
				245					250					255	
Leu	Arg	Cys	Ser	Ala	Ile	Pro	Glu	Asn	Ser	Val	Lys	Glu	Val	Leu	
				260					265					270	
Arg	Ala	Pro	Gly	Thr	Ile	Lys	Asp	Arg	Ile	Lys	Lys	Leu	Leu	Ala	
				275					280					285	
His	Lys	Asn	Ser	Met	Lys	Lys	Lys	Ala	Lys	Ile	Lys	Asn	Val	Thr	
				290					295					300	

Pro Glu Pro Thr Arg Thr Pro Thr Pro Lys Val Asn Leu Gln Pro
305 310 315

Phe Asn Tyr Glu Glu Ile Val Ser Arg Gly Gly Asn Ser His Gly
320 325 330

Gly Lys Lys Gly Asn Glu Glu Lys
335

<210> 120
<211> AT
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 120
cattagggg cactggtca tg 22

<210> 121
<211> AT
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 121
ggttgacgt atggtatcc atag 24

<210> 122
<211> AT
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 122
gataaattgt cagtacagct gtgaagacac agaagaaggg ccacagtgc 50

<210> 123
<211> 1199
<212> DNA
<213> Homo sapiens

<400> 123
gggagctgct gctgtggctg ctgggtgtgt ggcgcctgct cctgctcttg 50
gtgcacgtgc tgcgttctct gagggtgac ggcgacctga cgtactatg 100
ggcagagtgg cagggacgac gccagaaatg ggagctgact gatatggttg 150
tgtgggtgac tggagctctg agtgggaattg gtgaggagct ggcttaccag 200
ttgtctaaac taggagtttc tcttgtgctg tcagccagaa gagtgcctga 250

gotggaaagg gtgaaaagaa gatgocctaga gaatggcaat ttaaaagaaa 300
 aagatataact tgttttgccc cttgaacctga ccgacactgg ttcccatgaa 350
 ggggctacca aagctgtttct ccaggagttt ggtagaatcg acattcttgt 400
 caacaatggt ggaatgtccc agcgtttctct gtgcacggat accagcttgg 450
 atgtctacag aaagctaata gagcttaact acctagggac ggtgtccttg 500
 acaaaatgtg ttctgacctc catgatcgag aggaagcaag gaaagattgt 550
 taatgtgaat agcatcttgg gtatcatatc tgcacctctt ccacatggat 600
 actgtgctag caagcatgct ccacgggggtt tttttaatgg ccttcgaaca 650
 gaacttgcca cacaaccagg tataatagct tctaaccatt gccacggacc 700
 tgtgcaatca aatattgtgg agaattccct agctggagaa gtcacaaaaga 750
 ctataggcaa taatggagac cagtccaca agatgacaac cagtcttgt 800
 gtgggctga tgttaatcag catggccaat gatttgaaag aagtttggat 850
 ctcagaacaa cctttcttgt tagtaacata ttgtggcaa taacatgcaa 900
 cctgggcttg gtggataacc aacaagatgg ggaagaaaag gattgagaac 950
 ttttaagctg gtgtggatgc agaactctct tattttaaaa cttttaagac 1000
 aaaacatgac tgaaaagagc acctgtactt ttaagccac tggagggaga 1050
 aatggaaaac atgaaaacag caatctctct atgcttctga ataatcaag 1100
 actaatctgt gattttactt tttaatagat atgaacttgc ttaaacatg 1150
 gaatgaata aaaaataaat aataaaagat tgcacatgaat cttgcaaaa 1199

<210> 124
 <211> 249
 <212> PET
 <213> Homo sapiens

<400> 124
 Met Val Val Trp Val Thr Gly Ala Ser Ser Gly Ile Gly Glu Glu
 1 5 10 15
 Leu Ala Tyr Gln Leu Ser Lys Leu Gly Val Ser Leu Val Leu Ser
 20 25 30
 Ala Arg Arg Val His Glu Leu Glu Arg Val Lys Arg Arg Cys Leu
 35 40 45
 Glu Asn Gly Asn Leu Lys Glu Lys Asp Ile Leu Val Leu Pro Leu
 50 55 60

Asp	Leu	Thr	Asp	Thr	Gly	Ser	His	Glu	Ala	Ala	Thr	Lys	Ala	Val	65	70	75
Leu	Gln	Glu	Phe	Gly	Arg	Ile	Asp	Ile	Leu	Val	Asn	Asn	Gly	Gly	80	85	90
Met	Ser	Gln	Arg	Ser	Leu	Cys	Met	Asp	Thr	Ser	Leu	Asp	Val	Tyr	95	100	105
Arg	Lys	Leu	Ile	Glu	Leu	Asn	Tyr	Leu	Gly	Thr	Val	Ser	Leu	Thr	110	115	120
Lys	Cys	Val	Leu	Pro	His	Met	Ile	Glu	Arg	Lys	Gln	Gly	Lys	Ile	125	130	135
Val	Thr	Val	Asn	Ser	Ile	Leu	Gly	Ile	Ile	Ser	Val	Pro	Leu	Ser	140	145	150
Ile	Gly	Tyr	Cys	Ala	Ser	Lys	His	Ala	Leu	Arg	Gly	Phe	Phe	Asn	155	160	165
Gly	Leu	Arg	Thr	Glu	Leu	Ala	Thr	Tyr	Pro	Gly	Ile	Ile	Val	Ser	170	175	180
Asn	Ile	Cys	Pro	Gly	Pro	Val	Gln	Ser	Asn	Ile	Val	Glu	Asn	Ser	185	190	195
Leu	Ala	Gly	Glu	Val	Thr	Lys	Thr	Ile	Gly	Asn	Asn	Gly	Asp	Gln	200	205	210
Ser	His	Lys	Met	Thr	Thr	Ser	Arg	Cys	Val	Arg	Leu	Met	Leu	Ile	215	220	225
Ser	Met	Ala	Asn	Asp	Leu	Lys	Glu	Val	Trp	Ile	Ser	Glu	Gln	Pro	230	235	240
Phe	Leu	Leu	Val	Thr	Tyr	Leu	Trp	Gln	Tyr	Met	Pro	Thr	Trp	Ala	245	250	255
Trp	Trp	Ile	Thr	Asn	Lys	Met	Gly	Lys	Lys	Arg	Ile	Glu	Asn	Phe	260	265	270
Lys	Ser	Gly	Val	Asp	Ala	Asp	Ser	Ser	Tyr	Phe	Lys	Ile	Phe	Lys	275	280	285

Thr Lys His Asp

<100> 115

<110> 14

<120> DNA

<130> Artificial Sequence

<160>

<220> Synthetic oligonucleotide probe

<400> 125

gcaatggaact gggagctgc 19

4210: 126

4211: 19

4212: DNA

4213: Artificial Sequence

4220:

4223: Synthetic oligonucleotide probe

4400: 126

ctgtgaatag cctcctggg 19

4210: 127

4211: 19

4212: DNA

4213: Artificial Sequence

4220:

4223: Synthetic oligonucleotide probe

4410: 127

cttttcaagg cactggaggg 20

4210: 128

4211: 14

4212: DNA

4213: Artificial Sequence

4220:

4223: Synthetic oligonucleotide probe

4400: 128

ctgttagaat ccaagctggg atcc 24

4210: 129

4211: 13

4212: DNA

4213: Artificial Sequence

4220:

4223: Synthetic oligonucleotide probe

4400: 129

gagagctctgc atccacacca etc 23

4210: 130

4211: 46

4212: DNA

4213: Artificial Sequence

4220:

4223: Synthetic oligonucleotide probe

4400: 130

aactgacgct actatggggc gagtggcagg gacgacgcc agaattg 46

0210 + 131
0211 + 2365
0212 + DNA
0213 + Homo sapiens

0400 + 131
ctggacgtggg caccggccatc agctgttcgc ggcgtcttctc ctccaggtgg 50
ggcagggggtt cggggctggg ggagcatgtg ctgggacagg acagcatcct 100
caatcaatcc aacagcatat cgggttgcat cttctacaca ctacagctat 150
tgttaggttg cctggggaca cgcctgggctt ctgtcctgat gctgctgagc 200
tcctgggtgt cctcctctgg ttctgtctac ctggcctgga tctgttcttt 250
cgtctctat gattctctga ttgtttgtat caccacctat gctatcaacg 300
tgaacctgat gtggctcagt ttccggaaag tccaagaacc ccaggggcaag 350
gctaacaggc actgagccct caacccaagc caggctgacc tcatctgctt 400
tgttttggtc ttcaagccgc tcagcgtgac tgtggacagc gtggcccccgg 450
cccccccaag cctcaggagg gcaacacagt ccttggcgag tggccctggc 500
aggccagtgt gaggagggaa ggagcccaca tctgcagcgg ctccctgggtg 550
gcajacacct gggctctcac tgcctgcccac tgccttgaaa aggcagcagc 600
aacagaaatg aattcctggt cagtggtcct gggctctctg cagcgtgagg 650
gactcagccc tggggccgaa gaggtggggg tggctgcctt gcagttgcac 700
aggtctata accactacag ccaggggctca gacctggccc tgcctgcagc 750
cgccacccc acgacccaca caccctctg cctgcccacg ccggcccatc 800
gctcccctt tggagcctcc tgcctgggca ctggctggga tcaggacacc 850
agtcatgctc ctgggacctt acgcaatctg cgcctgctc tcatcagtcg 900
ccctacatgt aactgtatct acaaccagct gcaccagcga cacctgtcca 950
accggcccg gcctgggatg ctatgtgggg gcccccagcc tgggggtgag 1000
ggccctctgc agggagatto cgggggcccc gtgctgtgac tcagacctga 1050
cggacactgg gtccaggtg gcacatcag ctttgcatca agctgtgccc 1100
aggaggacgc tctgtgtgt ctgacaaaca cagctgctca cagttccttg 1150
ctgcaggctc gagtccaggg ggcagcttct ctggcccaga gccacagagc 1200
cccggagatg agtgatgagg acagctgtgt agcctgtgga tcttgaggga 1250
cagcaggtcc ccaggcagga gcacctccc catggccctg ggaggccagg 1300

ctgatgcacc agggacagct ggootgtggo ggagccctgg tgtcagagga 1350
 ggoggtgcta actggtgccc actgottcat tggggggccag gcccagagg 1400
 aatggagcgt agggctgggg accagaccgg aggagtgggg cctgaagcag 1450
 cccatcctgc atggagccta caccacccct gaggggggct acgacatggc 1500
 cccctctgtg ctggcccagc ctgtgacact gggagccagc ctggggcccc 1550
 cctgcccggc cctatcctgac caccacctgc ctgatgggga ggggtggctgg 1600
 gttctgggac gggcccggcc aggagccaggc atcagctccc tccagacagt 1650
 gcccgtgacc ctctgggggc ctaggggctg cagccggctg catgcagctc 1700
 ctgggggtga tggcagccct attctggcgg ggtatggctg taccagtgtc 1750
 gtgggtgagc tggccagctg tgagggcctg tctggggcac cactgggtga 1800
 tgaggtgagg ggcacatggt tctggccgg gctgcacagc ttcggagatg 1850
 cctgcccagg ccccgccagg ccgggggtct tccccggctc cctgcccctc 1900
 gaggactggg tccagcgttc ggaactggcag gtctacttcg ccgaggaacc 1950
 agagcccagc gctgagcctg gaagctgctt ggccaacata agccaaccac 2000
 ccagctgtct acaggggacc tggccattct caggacaaga gaatgcaggc 2050
 aggcacatgg cactactgac cctgtccctc cccctctgtc atgtgtgatt 2100
 ccaggccaca gggcaggccc agaagcccag cagctgtggg aaggaaacct 2150
 cctgggggca caggtgcccc ccccccccc tgcaggacag ggggtgtctgt 2200
 ggacactccc acaccccaact ctgtacccaa gcaaggctct cagctttcct 2250
 cctcctttac tctttcagat acaatcacgc cagccacgtt gttttgaaaa 2300
 ttcttttttt tggggggcag cagttttcct ttttttaaac ttaaataaat 2350
 tgttacaaaa taaaa 2365

<210> 132
 <211> 571
 <212> PRT
 <213> Homo sapiens

<400> 132
 Met Leu Leu Ser Ser Leu Val Ser Leu Ala Gly Ser Val Tyr Leu
 1 5 10 15
 Ala Trp Ile Leu Phe Phe Val Leu Tyr Asp Phe Cys Ile Val Cys
 20 25 30

Ile Thr Thr Tyr Ala	Ile Asn Val Ser Leu Met Trp Leu Ser Phe	35	40	45
Arg Lys Val Gln Glu Pro Gln Gly Lys Ala	Lys Arg His Gly Asp	50	55	60
Thr Val Pro Gly Glu Trp Pro Trp Gln Ala	Ser Val Arg Arg Gln	65	70	75
Gly Ala His Ile Cys Ser Gly Ser Leu Val	Ala Asp Thr Trp Val	80	85	90
Leu Thr Ala Ala His Cys Phe Gln Lys Ala	Ala Ala Thr Glu Leu	95	100	105
Asn Ser Trp Ser Val Val Leu Gly Ser Leu	Gln Arg Glu Gly Leu	110	115	120
Ser Pro Gly Ala Glu Glu Val Gly Val	Ala Ala Leu Gln Leu Pro	125	130	135
Arg Ala Tyr Asn His Tyr Ser Gln Gly	Ser Asp Leu Ala Leu Leu	140	145	150
Gln Leu Ala His Pro Thr Thr His Thr	Pro Leu Cys Leu Pro Gln	155	160	165
Pro Ala His Arg Phe Pro Phe Gly Ala	Ser Cys Trp Ala Thr Gly	170	175	180
Trp Asp Gln Asp Thr Ser Asp Ala Pro	Gly Thr Leu Arg Asn Leu	185	190	195
Arg Leu Arg Leu Ile Ser Arg Pro Thr	Cys Asn Cys Ile Tyr Asn	200	205	210
Gln Leu His Gln Arg His Leu Ser Asn	Pro Ala Arg Pro Gly Met	215	220	225
Leu Cys Gly Gly Pro Gln Pro Gly Val	Gln Gly Pro Cys Gln Gly	230	235	240
Asp Ser Gly Gly Pro Val Leu Cys Leu	Gln Pro Asp Gly His Trp	245	250	255
Val Gln Ala Gly Ile Ile Ser Phe Ala	Ser Ser Cys Ala Gln Glu	260	265	270
Asp Ala Pro Val Leu Leu Thr Asn Thr	Ala Ala His Ser Ser Trp	275	280	285
Leu Gln Ala Arg Val Gln Gly Ala Ala	Phe Leu Ala Gln Ser Pro	290	295	300
Glu Thr Pro Glu Met Ser Asp Glu Asp	Ser Cys Val Ala Cys Gly	305	310	315

Ser	Leu	Arg	Thr	Ala	Gly	Pro	Gln	Ala	Gly	Ala	Pro	Ser	Pro	Trp	320	325	330
Pro	Trp	Glu	Ala	Arg	Leu	Met	His	Gln	Gly	Gln	Leu	Ala	Cys	Gly	335	340	345
Gly	Ala	Leu	Val	Ser	Glu	Glu	Ala	Val	Leu	Thr	Ala	Ala	His	Cys	350	355	360
Phe	Ile	Gly	Arg	Gln	Ala	Pro	Glu	Glu	Trp	Ser	Val	Gly	Leu	Gly	365	370	375
Thr	Arg	Pro	Glu	Glu	Trp	Gly	Leu	Lys	Gln	Leu	Ile	Leu	His	Gly	380	385	390
Ala	Tyr	Thr	His	Pro	Glu	Gly	Gly	Tyr	Asp	Met	Ala	Leu	Leu	Leu	395	400	405
Leu	Ala	Gln	Pro	Val	Thr	Leu	Gly	Ala	Ser	Leu	Arg	Pro	Leu	Cys	410	415	420
Leu	Pro	Tyr	Pro	Asp	His	His	Leu	Pro	Asp	Gly	Glu	Arg	Gly	Trp	425	430	435
Val	Leu	Gly	Arg	Ala	Arg	Pro	Gly	Ala	Gly	Ile	Ser	Ser	Leu	Gln	440	445	450
Thr	Val	Pro	Val	Thr	Leu	Leu	Gly	Pro	Arg	Ala	Cys	Ser	Arg	Leu	455	460	465
His	Ala	Ala	Pro	Gly	Gly	Asp	Gly	Ser	Pro	Ile	Leu	Pro	Gly	Met	470	475	480
Val	Cys	Thr	Ser	Ala	Val	Gly	Glu	Leu	Pro	Ser	Cys	Glu	Gly	Leu	485	490	495
Ser	Gly	Ala	Pro	Leu	Val	His	Glu	Val	Arg	Gly	Thr	Trp	Phe	Leu	500	505	510
Ala	Gly	Leu	His	Ser	Phe	Gly	Asp	Ala	Cys	Gln	Gly	Pro	Ala	Arg	515	520	525
Pro	Ala	Val	Phe	Thr	Ala	Leu	Pro	Ala	Tyr	Glu	Asp	Trp	Val	Ser	530	535	540
Ser	Leu	Asp	Trp	Gln	Val	Tyr	Phe	Ala	Glu	Glu	Pro	Glu	Pro	Glu	545	550	555
Ala	Glu	Pro	Gly	Ser	Cys	Leu	Ala	Asn	Ile	Ser	Gln	Pro	Thr	Ser	560	565	570

Cys

(210) 133
 (211) 24
 (212) DNA

<211> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 133

actgtgtgtgt gcttcgagac tgaac 24

<210> 134

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gttgggagaca gtttagacag ccttc 24

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

agctgggcatc atcagctttg catcaagctg tgcccaggag gacgc 45

<210> 136

<211> 1093

<212> DNA

<213> Homo sapiens

<400> 136

atggggggccc cgggccccca ttggggcggg gcttcgttgc gggggcgact 50

gagccaggct gggccggctc cctgagtcac agagtgggag cggcgcgcca 100

ggggcagcct tccaccacgg ggagcccaga tgtcagccgc ctccacaggaa 150

catgtcttgt cggcgggggca gccctggcat ggttgtgcac gtgggtgcag 200

cctggggaga actgtgggtc tgcctcacag gagccctgga ggtccaggtc 250

cctgaagacc cagtggtygg actggtgggg accgatgcca cctgtgcttg 300

ctcctttctc cctgagcctg gcttcagcct ggcacagctc aacctcatct 350

ggcagctgac agataccaaa cagctgggtg acagctttgc tgaggggcag 400

gancagagca ggccttatgc caaccgcaag gccctcttcc cggacctgct 450

ggcacaagga aacgcacccc tgaggctgca ggcgctgcgt gtggcggacg 500

agggcagctt cactgtcttc gtgagcatcc gggatttcgg cagcgtctgc 550

gtcagcctgc aggtggccgc tccctaactcg aagcccagca tgaccctgga 670
 gcccaacaag gacctggggc caggggacac ggtgaccata acgtgctcca 680
 gctaaccaggc ctaccctgag gctgaggtgt cctggcagga tgggcagggt 700
 gtgcccctga ctggcaacgt gaccacgtcg cagatggcca accagcaggc 750
 cttgtttgat gtgcacagcg cctcgcggtt ggtgctgggt gccaatggca 800
 cctacagctg cctggtgcgc aaccccgctc tgcagcagga tggcaccgc 850
 cctgtcacca ccacagggca ggcctatgac tccccccag aggcctctg 900
 ggtgaccctg gggctgtctg cctgtctcat tgcactgtg gtggccctgg 950
 ccttcgtctg ctggagaaag atcaaacaga gctgtgagga ggagaatgca 1000
 ggagctgagg accaggatgg ggaggagaa ggcctcaaga cagccctgca 1050
 ggccttgaaa cactctgaca gcaagaaga tgatggaca gaaatagcct 1100
 gacccatgagg accagggagc tgcacccct cctacagct cctacccctc 1150
 ggcctcaatg gggctgcact gtgagccctg ccccaacag atgcacccg 1200
 cctctgacag tgggtccctt ctccaaagga tgggatacac agaccactgt 1250
 gcagccttat ttctccaatg gacatgatto ccaagtcata ctgctgcctt 1300
 tttctctata gacacaatga acagaccacc cacaacctta gttctctaag 1350
 ccatcctgac tcttgcctta ttccacagta cctacatttc ttagggacac 1400
 agtacactga ccacatcac accctcttct tccagtgctg cgtggacccat 1450
 ctggctgcct tttctctca aaagatgcaa tcttcagact gactgacccc 1500
 ctgccttatt tcacaaaaga cactatgcat agtcaccccg gccttgcctc 1550
 tccaatggcc gtgatacaat agtgatcatg ttcagccctg ctccacccg 1600
 catagaatct tttctctca gacagggaca gtggggcttc aacatctcct 1650
 ggagctotaga agctgtttcc ttcccccctc ttcctccctg ccccaagtga 1700
 agacagggca gggccaggaa tgctttgggg acaaccagg gactgcctcc 1750
 cccccccc atggtgctat cctggggctg gggcagtctt ttcctgctt 1800
 gcctctggcc agctcctggc ctctggtaga gtgagacttc agacgttctg 1850
 atgcctcccg gatgtcatct ctccctgccc cagggaatgga agatgtgagg 1900
 acttctaatt taaatgtggg actcggaggg attttgtaaa ctgggggtat 1950

attttggggg aaataaatgt ctttgtaaaa aaaaaaaaaa aaaaaaaaa 1998

42110> 137
42110> 316
42110> PRT
42110> Homo sapiens

42200>
42200> unsure
42200> 233
42200> unknown amino acid

44000> 137
Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly
1 5 10 15
Ala Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu
20 25 30
Val Gln Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp
35 40 45
Ala Thr Leu Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu
50 55 60
Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu
65 70 75
Val His Ser Phe Ala Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala
80 85 90
Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala
95 100 105
Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly Ser Phe
110 115 120
Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val Ser
125 130 135
Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu
140 145 150
Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys
155 160 165
Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp
170 175 180
Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met
185 190 195
Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val
200 205 210
Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro
215 220 225

Val	Leu	Gln	Gln	Asp	Ala	His	Xaa	Ser	Val	Thr	Ile	Thr	Gly	Gln
				230					235					240
Pro	Met	Thr	Phe	Pro	Pro	Glu	Ala	Leu	Trp	Val	Thr	Val	Gly	Leu
				245					250					255
Ser	Val	Cys	Leu	Ile	Ala	Leu	Leu	Val	Ala	Leu	Ala	Phe	Val	Cys
				260					265					270
Trp	Arg	Lys	Ile	Lys	Gln	Ser	Cys	Glu	Glu	Glu	Asn	Ala	Gly	Ala
				275					280					285
Gln	Asp	Gln	Asp	Gly	Gln	Gly	Gln	Gly	Ser	Lys	Thr	Ala	Leu	Gln
				290					295					300
Pro	Leu	Lys	His	Ser	Asp	Ser	Lys	Glu	Asp	Asp	Gly	Gln	Glu	Ile
				305					310					315

Ala

<210> 133
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<400> 139
 atggcaccgc tcaacctcat ctgg 24

<210> 139
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<400> 139
 agctgtctgtc tgtctcattg 20

<210> 140
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<400> 140
 ggcacacagta tactgaccac 20

<210> 141
 <211> 24

<112> DNA
<113> Artificial Sequence

<121>
<123> Synthetic oligonucleotide probe

<400> 141
tgaaaccag gcagctgtaa gtgc 24

<112> 142
<113> 24
<112> DNA
<113> Artificial Sequence

<121>
<123> Synthetic oligonucleotide probe

<400> 142
tgaagaaga gggctgtgat gtgg 24

<112> 143
<113> 45
<112> DNA
<113> Artificial Sequence

<121>
<123> Synthetic oligonucleotide probe

<400> 143
caactgacag acaccaacaa gctggtgcac agtttcaccg aaggc 45

<112> 144
<111> 2336
<112> DNA
<113> Homo sapiens

<112>
<111> unsure
<112> 1630, 1673
<113> unknown base

<400> 144
tttgtgaccc ttgagaaaag agttggtggt aaatgtgcc agttttctaa 50
gaagggggag tcttgaaact gtctgaagcc ctgtctcgta agctttgaac 100
taagttctta aatctatgaa gtctgagggc ctctgctgc ttctgtaggg 150
actctcttcc ttgcttcagg aacatgaggc tttctttgtg gaacgcggtc 200
ttgaactcgt tcttcacttc ttgtattggg gctttgatcc ctgaaccaga 250
agtgaaaatt gaagttctcc agaagccatt catctgccat cgcaagaacca 300
aaggagggga ttgatgttg gtccactatg aaggctactt agaaaaggac 350
ggctccttat ttcactccac tcacaaacat aacaatggtc agcccatttg 400

gtttacccctg ggcatectgg aggcctctcaa aggttggggac cagggccttga 450
aaggaatgtg tctaggagag aagagaaago tcatcattcc tootgcctctg 500
ggctatggaa aagaaggaaa aggtaaaaatt cccccagaaa gtacactgat 550
atttaattatt gatctcctgg agattcgaaa tggaccaaga tcccatgaat 600
cattccaaga aatggatctt aatgatgaat ggaaactctc taaagatgag 650
gttaaaagcat attcaaaaga ggagtctgaa aaacatgggtg cgggtggtgaa 700
tgaaagtcac catgatgctt tggggaggga tattcttgat aaagaagatg 750
aagacaaaga tgggtttata tctgcacagag aatttacata taaacacgat 800
gagttataga gatacatcta ccccttttaat atagcactca cctttcaaga 850
gagggcagtc atcctttaaag aacattttat tcttatacaa tgtctctct 900
tgcttcgctt ttcattttta tatatttttc ccgactccta tttaaagaac 950
cccttaggtt totaagtacc cctctctctc tgataagtta ttgggaagaa 1000
aaagctaaatt ggtctttgaa tagaagaatt ctggacaatt tttcacttcc 1050
acagatatga agcttttgctt tactctctca cctataaatt taaaatgctg 1100
caaactggaa tataaccaga catgagacca ggttatagca caaattagca 1150
ccctatattt ctgcttccct ctattttctc caagttagag gccaacattt 1200
gaaaagcctt ttgcaatago ccaaggcttg ctattttcat gttataatga 1250
aatagtttat gtgtaactgg ctctgagctc ctgcttgagg accagaggaa 1300
aatgggttgt ggacctgact tgttaactgg tactgcttta ctaaggagat 1350
gtgcaatgct gaagttagaa acaaggttaa tagccaggca tgggtggtca 1400
tgcttgtaat ccagacactt tgggaggctg aggggggggg atcacctgag 1450
gttgggagtt ccagaccago ctgaaccaac cggagaaaac ctatctctac 1500
taaaaaatca aagttagccg gctggttgat gctgctctgt aatccagct 1550
accaggaag gctgaggggg cagaatcaat tgaaccagag gcagagggtg 1600
cggtaagccg agatcacctn cagcctggac actctgtctc gaaaaaagaa 1650
aagaacacgg ttaataccat atnaatatgt atgcattgag acatgctacc 1700
taggaactaa gctgatgaag cttggctcct agtgattggt ggctattat 1750
gataaatagg acaaatcatt tatgtgtgag tttctttgta ataaaatgta 1800

tcaatatggt atagatgagg tagaaagtta tatttatatt caatatattac 1850
 ttcttaagge tagcggaata tcttctctgg ttctttaatg ggtagtctat 1900
 agtatattat actacaataa cattgtatca taagataaag tagtaaaacca 1950
 gtctacattt tcccatttct gtctcatcaa aaactgaagt tagctgggtg 2000
 tgggtggtca tggctgtaat cccagcactt tggggggccaa ggaggggtgga 2050
 tcaactgaga tcaggagttc aagaccagcc tggccaacat ggtgaaaact 2100
 tgtctctact aaaaatacaa aaattagcca gggtggtggtg tgcacacctg 2150
 tagtcccaga tactcggggag gctgagacag gagatttctg tgaaccggg 2200
 agggggaggt tgcagtgagc caagattctg ccactgcact ccagcctggg 2250
 tgcacagaga agactccatc tcaaaaaaaaa aaaaaagaag cagacctaca 2300
 gcagctacca ttgaataaat acctatctg gatttt 2336

<210> 145
 <211> 211
 <212> PRT
 <213> Homo sapiens

<210> 145
 Met Arg Leu Phe Leu Trp Asn Ala Val Leu Thr Leu Phe Val Thr
 1 5 10 15
 Ser Leu Ile Gly Ala Leu Ile Pro Glu Pro Glu Val Lys Ile Glu
 20 25 30
 Val Leu Gln Lys Pro Phe Ile Cys His Arg Lys Thr Lys Gly Gly
 35 40 45
 Asp Leu Met Leu Val His Tyr Glu Gly Tyr Leu Glu Lys Asp Gly
 50 55 60
 Ser Leu Phe His Ser Thr His Lys His Asn Asn Gly Gln Pro Ile
 65 70 75
 Trp Phe Thr Leu Gly Ile Leu Glu Ala Leu Lys Gly Trp Asp Glu
 80 85 90
 Gly Leu Lys Gly Met Cys Val Gly Glu Lys Arg Lys Leu Ile Ile
 95 100 105
 Pro Pro Ala Leu Gly Tyr Gly Lys Glu Gly Lys Gly Lys Ile Pro
 110 115 120
 Pro Glu Ser Thr Leu Ile Phe Asn Ile Asp Leu Leu Glu Ile Arg
 125 130 135
 Asn Gly Pro Arg Ser His Glu Ser Phe Gln Glu Met Asp Leu Asn
 140 145 150

Asp Asp Trp Lys Leu Ser Lys Asp Glu Val Lys Ala Tyr Leu Lys
155 160 165

Lys Glu Phe Glu Lys His Gly Ala Val Val Asn Glu Ser His His
170 175 180

Asp Ala Leu Val Glu Asp Ile Phe Asp Lys Glu Asp Glu Asp Lys
185 190 195

Asp Gly Phe Ile Ser Ala Arg Glu Phe Thr Tyr Lys His Asp Glu
200 205 210

Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<230> 146

ctttcccttgc ttcagcaaca tgaggc 26

<210> 147

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<230> 147

ggcctagagca ggaggaatga tgagc 25

<210> 148

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<230> 148

gtggaagcgc gtcttgactc tgttcgtcac ttctttgatt ggggctttg 49

<210> 149

<211> 2196

<212> DNA

<213> Homo sapiens

<230> 149

aataaaagctt ccttaatgtt gtatatgtct ttgaagtaca tccgtgcatt 50

ttttttttagc atccaaacat tctctccttg tagttctcgc cccctcaaat 100
 caacctctcc cgtagccccc ccgaactaca tctcagttctc tgaaaatgca 150
 cagagatgac tggctacctc gccctgcctt cagcctccag gggctcagtc 200
 tctttttctc ttgggtgcca ccaggacgga gcctggaggt cacagtaact 250
 gccaccccca acgtcccca tggctctgac gcccgctgc cctgcacctt 300
 caactcctgc taccagtgca accacaaaca gttctccttg aactggactt 350
 accaggagtg caacaactgc tctgaggaga tgttccctca gttccgcatg 400
 aagatcatta acctgaagct ggagcgggtt caagacccgc tggagttctc 450
 agggaaaccc agcaagtaac atgtgtcggc gatgctgaga aacgtgcaga 500
 cggaggatga ggggatttac aactgtaca tcatgaaccc cctgaacgc 550
 caacgtggcc atggcaagat ccatctgcag gtctcctgag aagagccccc 600
 tgagcgggac tccacggctg ccgtgattgt gggcgctcc gcggggggct 650
 tctggctgt ggtccatctg gctctgatgg tggccaagt tctgaggaga 700
 aaaaaagagc agaagctgag cacagatgac ctgaagacc aggaggaggg 750
 caagacggac ggtgaaggca acccgatga tggcgccaag tagtgggtgg 800
 ccggccctgc agcctccctg gtcccgctcc ccccccctc cggcctgtac 850
 agtgaacctg cctgctcctt cttggctgca tcccgtaga ctaggacccc 900
 agggccccc tggggcctcc tgaaccccg acttcgtat cccacccctg 950
 caccagagct gacccactct cttccatcc agaaaactgc catgctctgg 1000
 gacgtgtggg cctggggag agggagagaaa gggctccca ctcacagttc 1050
 ctggggggag gcaggaggca catgtgaggg tcccagaga gaaggagtg 1100
 ggtgggcagg ggtagaggag gggccgctgt cactgcca gtgcttgct 1150
 ggcagtggct tcagagagga cctgggtggg agggagggt tccctgtgct 1200
 gacagcgctc ctcagggag gccctggctt ggcacggctg tgcctcctcc 1250
 ctgctcccag ccagagcag ccacagggc ggaggtgac atgagttct 1300
 gaaacttgga ggggcctgtt aaaggcatga ctgtgcatt cagggcactg 1350
 acggaaaagc agggctgcag gcaaacctgg acatgtgcc tggcccagga 1400
 ggccatgttg ggcctcgtt tccattgcta gtggcctct tggggctct 1450
 gttggctct aatcccttag gactgtggat gaggccagac tggaaagaca 1500

gatccaggta ggggggcaatg ttcccccagcg gggaccacac aacagaggcc 1550
 agtttcaaaag ccagctgaggg ggtgaggggg tggggctcca tggtagaatgc 1600
 aggttgctgc aggtctctgcc ttctccatgg ggtaaccacc ctgcctctggg 1650
 caggggcacg caaggctggg aaatgaggag gcacatgcaca ggggtggggca 1700
 gttttctctg gggcttcagt gagaactctc ccagttggcc ttgggtggggg 1750
 ctccacctgg tttctggcta cagagaggga agggaaagcc tgaggccggg 1800
 ataaggggag gccttgggac ctgagctgcc aatgcacgcc ctgtcccatc 1850
 tggggccacg ctactcctc ctctcccaac aactcccttc gtggggacaa 1900
 agtgacaat tgtaggccag gcacagtggc ccagcctgt aatccacgca 1950
 cctggggagg ccaaggggg tggattacct ccactcgttc agtagaaatg 2000
 tgcacaaacc cactctact aaaaatcaca gaattagctg ggcgtggtgg 2050
 ggtctgctg taatccacg tacttgggag gctgaggcag gagaatcct 2100
 tgagcccggg aagcagaggt tgcagtgaac tgatatagtg atagtgcac 2150
 tgcattcag cctgggtgac atagagagac tccctctcaa aaaaaa 2196

<Q10> 150
 <Q11> 215
 <Q12> PRT
 <Q13> Homo sapiens

<Q00> 150
 Met His Arg Asp Ala Trp Leu Pro Arg Pro Ala Phe Ser Leu Thr
 1 5 10 15
 Gly Leu Ser Leu Phe Phe Ser Leu Val Pro Pro Gly Arg Ser Met
 20 25 30
 Glu Val Thr Val Pro Ala Thr Leu Asn Val Leu Asn Gly Ser Asp
 35 40 45
 Ala Arg Leu Pro Cys Thr Phe Asn Ser Cys Tyr Thr Val Asn His
 50 55 60
 Lys Gln Phe Ser Leu Asn Trp Thr Tyr Gln Glu Cys Asn Asn Cys
 65 70 75
 Ser Glu Glu Met Phe Leu Gln Phe Arg Met Lys Ile Ile Asn Leu
 80 85 90
 Lys Leu Glu Arg Phe Gln Asp Arg Val Glu Phe Ser Gly Asn Pro
 95 100 105
 Ser Lys Tyr Asp Val Ser Val Met Leu Arg Asn Val Gln Pro Glu

110	115	120
Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg		
125	130	135
His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu		
140	145	150
Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser		
155	160	165
Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val		
170	175	180
Lys Cys Val Arg Arg Lys Lys Glu Gln Lys Leu Ser Thr Asp Asp		
185	190	195
Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro		
200	205	210
Asp Asp Gly Ala Lys		
215		

<210> 151
 <211> 524
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 143, 133
 <223> unknown base

<400> 151
 ggtgttatatg tcttgaagta cctcctgtgca ttttttttag cctccaacca 50
 tctcctcttg tagttctcgc cccctcaaat cactttctcc cttagccac 100
 ccaactaaca tctcagttct tgaanaatgca cagagatgac tggctacctc 150
 ggcctgcctt cagcctcagc gggctcagtc tttttttctc ttgggtgcca 200
 ccaggcagga gcatggaggt ccacagttac tgnccacct caactctctc 250
 aatggctctg acgcccctt ggcctgcctt tcaactcttg ctacacagtg 300
 aacacaaaac agttctcctt gaactggact taccaggagt gcaacaactg 350
 ctctgaggag atgttctctc agttccgat gaagatcatt aactgaagc 400
 tggagcggtt tcaagacgcg gtggagttct cagggaaccc cagcaagtac 450
 catgtgtcgg tgatgtgag aaactgtcag ccggaggatg aggggattta 500
 caactgctac atcatgaac cccc 524

<210> 152

<211> 368
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 56, 123
<223> unknown base

<400> 152
tcaaggagggt catctctttt tctctttggt gccaccagg acggagcatg 50
gaggttccca tacctgccac cctcaacgtc ctcaatgggt ttgaagcccg 100
actccatgc accttcaact ccngctacac agtgaaccac aaacagttct 150
cctggaactg gatttaccag gactgcaaca actggctctg aggagatgtt 200
cttcacgttc ccgcattggaa gatcatttaa cctgaaagct ggaagcgggt 250
ttcagagacc gcttggaagt ctctcagga accccagcaa gtacgatgtg 300
tgggtgatgc tgagaaaagt gcagccggag gatgagggga ttacaaactg 350
ctaatatg aacccccc 363

<210> 153
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 153
acggagcatg gaggtccaca gtac 24

<210> 154
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 154
gcacgttct cagcatcac gac 23

<210> 155
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 155

cgctgcctt gacattcaa ctctgtctac acagtgaacn acaaacagtt 50

<210> 156

<211> 2630

<212> DNA

<213> Homo sapiens

<400> 156

tgcggcgacc gtgtacacc atgggctcc accccggcc ctaccgtgtg 50

gggtgtctcc cggatggct cctgttctc ctgtgtgtgc taatgtgtgt 100

cggggaccca ggcctccgg cgggaagtc ccccccagtg gtgtgggtcc 150

ctgttgattt gggtaaccaa ctggaagcca agctggacaa gcgacagtg 200

gtgtactacc ctgtctccaa gaagacggaa agtaacttca caatctggct 250

aaactggaa ctgtgtgtgc ctgtcatcat tgaactgttg attgacaata 300

tcaagctggc ttacaacaaa acatccaggg ccacccagtt tctgatggc 350

gtggtgttac gtgtccctgg ctttgggaag acctctcac tggagtccct 400

ggaccccagc aaaagcagcg tgggttctta ttccacacc atgggtggaga 450

ccctgtggg ctggggctac acacggggcg aggatgtccg aggggtctcc 500

tatgaactgg gcgagccccc aaatgaaaa gggccctact tctggccct 550

cgcagagatg atcagggaga tgtaccagct gtatgggggc cccgtggctg 600

tgggtgcccc cagtatgggc aacatgtaca cgtctactt tctgcagcgg 650

cagccgcagg cctgggaagg caagtatata cgggccttcg tgtcactggg 700

tgcgcctctg gggggcgtgg ccaagacccg ggcgcctctg gcttcaggag 750

acaccaaccc gatcccgctc atcgggcccc tgaagatccg ggagccagcag 800

cggtcagcgc tctccaccag ctgggtgtgt ccttacaact acacatggct 850

acctgagaag gtgtctgtgc agacacccac aatcaactac acctgcggcg 900

actaccccaa gttcttccag gacatcggct ttgaagatgg ctggctcatg 950

cggcaggaca cagaagggtt ggttgaagcc acgatgccac ctggcgtgca 1000

gtgtcaactgc ctctatggta ctggcgtccc cacaccagac tcttctact 1050

atgagagctt cctgacccgt gaacctaaaa tctgcttgg tgaaggcgat 1100

cgtactgtga acctgaagag tgcctgcag tgcagggcct ggcagagccg 1150

ccaggagcac caagtgttgc tgcaggagct gccaggcagc gagcacatcg 1200

agatgtctgc caacgcaccc acctggcct atctgaaaac tgtgtcctt 1250

ggggccctgac tccctgtgcca caggactcct gtggctcggc cgtggacctg 1300
ctgttcggcct ctggggctgt catggccccc gcgttttgcg aagtttgcg 1350
ccacccattc aaggcccccga gtcttggaat gtgaagcacc tggcatgggg 1400
aagtctctgt tcttatccct tctctgtggc agtgaagaag gaagaaatga 1450
gagtctagac tcaagggaca ctggatggga agaatgctgc tgatggtgga 1500
actgctgtga ccttaggaat ggtccacag ggtggactgg ctgggcccctg 1550
gtcccagtc ctggctgggg ccctgtgtcc cccattccct gtgggctctt 1600
catacttgc tactggggcc tggcccccga gcttccctat gagggatgtt 1650
actgggtgt ggtccctgtc ccagaggtcc cagggatcgg ctccctggccc 1700
ctgggtgac cctcccccac caccagccac agataggcct gccactggtc 1750
atgggtagct agagctctgt gcttccctgt ggcttagctg gtggccagcc 1800
tgactggctt cctggggcag cctagtagct cctgcaggca ggggcagttt 1850
gttgctctct cctgggttcc caggcccctgg gacatctcac tccactccca 1900
cctccctcac caccaggagc attcaagctc tggattgggc agcagactgt 1950
cccacagtc ccaggtctgt gttccagggg cctgatttc ctgggatgtg 2000
ctattggccc caggactgaa gctgcctccc ttcacccctg gactgtgggt 2050
ccaaggatga gagcaggggt tggagccatg gcttctggg aacctatgga 2100
gaaagggaat ccaagggaag agccaaggct gctccagat cccctjagct 2150
gcacctcttg ctaacccccc catcacactg ccacccctgc ctagggtccc 2200
actagtacca agtgggtcag cacagggctg aggatggggc cctatccac 2250
cctggccagc acccagctta gtgctgggac tagccacaga acttgaatgg 2300
gacctgaga gagccagggg tcccctgagg ccccctagg ggcttctgt 2350
ctgccccagg gtgctccatg gatctccctg tggcagcag catggagagt 2400
cagggctgcc ttcctggcag taggtctcaa gtgggtgaat ggcacagggc 2450
cgagaaaagg gtacagcttc taggtggggg tcccaaagac gcttcagggc 2500
tggactgagc tctctccca cagggtttct gtgcagctgg atttctctg 2550
ttgcatacat gctggcacc tctctccct tigtctgag tggccccaca 2600
tggggctctg agcaggctgt atctggatto tggcaataaa agtactctgg 2650

atgctgtaaa aaaaaaaaaa aaaaaaaaaa 2680

42100 157
42110 412
42120 PRT
42130 Homo Sapien

43000 157
Met Gly Leu His Leu Arg Pro Tyr Arg Val Gly Leu Leu Pro Asp
1 5 10 15
Gly Leu Leu Phe Leu Leu Leu Leu Leu Met Leu Leu Ala Asp Pro
20 25 30
Ala Leu Pro Ala Gly Arg His Pro Pro Val Val Leu Val Pro Gly
35 40 45
Asp Leu Gly Asn Gln Leu Glu Ala Lys Leu Asp Lys Pro Thr Val
50 55 60
Val His Tyr Leu Cys Ser Lys Lys Thr Glu Ser Tyr Phe Thr Ile
65 70 75
Trp Leu Asn Leu Glu Leu Leu Leu Pro Val Ile Ile Asp Cys Trp
80 85 90
Ile Asp Asn Ile Arg Leu Val Tyr Asn Lys Thr Ser Arg Ala Thr
95 100 105
Gln Phe Pro Asp Gly Val Asp Val Arg Val Pro Gly Phe Gly Lys
110 115 120
Thr Phe Ser Leu Glu Phe Leu Asp Pro Ser Lys Ser Ser Val Gly
125 130 135
Ser Tyr Phe His Thr Met Val Glu Ser Leu Val Gly Trp Gly Tyr
140 145 150
Thr Arg Gly Glu Asp Val Arg Gly Ala Pro Tyr Asp Trp Arg Arg
155 160 165
Ala Pro Asn Glu Asn Gly Pro Tyr Phe Leu Ala Leu Arg Glu Met
170 175 180
Ile Glu Glu Met Tyr Gln Leu Tyr Gly Gly Pro Val Val Leu Val
185 190 195
Ala His Ser Met Gly Asn Met Tyr Thr Leu Tyr Phe Leu Gln Arg
200 205 210
Gln Pro Gln Ala Trp Lys Asp Lys Tyr Ile Arg Ala Phe Val Ser
215 220 225
Leu Gly Ala Pro Trp Gly Gly Val Ala Lys Thr Leu Arg Val Leu
230 235 240
Ala Ser Gly Asp Asn Asn Arg Ile Pro Val Ile Gly Pro Leu Lys

245	250	255
Ile Arg Glu Gln Gln Arg Ser Ala Val	Ser Thr Ser Trp Leu Leu	
260	265	270
Pro Tyr Asn Tyr Thr Trp Ser Pro Glu	Lys Val Phe Val Gln Thr	
275	280	285
Pro Thr Ile Asn Tyr Thr Leu Arg Asp	Tyr Arg Lys Phe Phe Gln	
290	295	300
Asp Ile Gly Phe Glu Asp Gly Trp Leu Met	Arg Gln Asp Thr Glu	
305	310	315
Gly Leu Val Glu Ala Thr Met Pro Pro	Gly Val Gln Leu His Cys	
320	325	330
Leu Tyr Gly Thr Gly Val Pro Thr Pro	Asp Ser Phe Tyr Tyr Glu	
335	340	345
Ser Pro Pro Asp Arg Asp Pro Lys Ile	Cys Phe Gly Asp Gly Asp	
350	355	360
Gly Thr Val Asn Leu Lys Ser Ala Leu	Gln Cys Gln Ala Trp Gln	
365	370	375
Ser Arg Gln Glu His Gln Val Leu Leu	Gln Glu Leu Pro Gly Ser	
380	385	390
Glu His Ile Glu Met Leu Ala Asn Ala	Thr Thr Leu Ala Tyr Leu	
395	400	405
Lys Arg Val Leu Leu Gly Pro		
410		

<110> 158

<111> 73

<112> DNA

<113> Artificial Sequence

<210>

<220> Synthetic oligonucleotide probe

<400> 158

ctgggactac acacggggtg agg 23

<210> 159

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 159

ggtaggggtg cagaaagtag agcg 24

4210 - 160
4211 - 45
4212 - DNA
4213 - Artificial Sequence

4220 -
4223 - Synthetic oligonucleotide probe

4408 - 160
gccccaaatg aaaaaggggc ctacttcctg gccctccgag agatg 45

4210 - 161
4211 - 1612
4212 - DNA
4213 - Homo sapiens

4408 - 161
gggacgggtg gggggacggg gggggggggg gacgggggg gacgggggac 50
atcgagaggg gggcctaagg cgggggcaag gggggggggt ccttcgacct 100
cggcgcttcc ctgacgcagg cgcaggtggg ggcgcgaggc gtgtgcttgg 150
ccttcggcctt gatcgtgttc ccttcgcctc atgggtgagg ctacagcaat 200
gccccagagt ctaagcagat gtactgggtg cccaacggca acgaggatgc 250
atgctgctat ggcagtgcca tgggggtggt ggcttcctg gccctgggct 300
ccttccttggg ggtcgacggg tatttcctcc agatcagcaa cgcctactga 350
agcaggtacc tggtcattgg cgactcgctc ctctcagctc cctggacctc 400
cctctgggtt gttgggttct gcttcctcac caacagtggt gcagtcacca 450
cctcgaagga cgtgctgggt ggggcggact ctgtgagggg agccatcacc 500
ctcagcttct cctccatctc cctctggggg gtgttgggct ccttgggcta 550
ccatcgctac aaggctgggt tggacgactt cctccagaat cagctcgacc 600
ccactccgga cccaacact gctacggctt cctaccagg tgcctctgtg 650
gataactacc aacagccacc ctccaccag aacggggaga ccacggaggg 700
ctaccagggg cccctgtgtt actgagtgga ggttagcgtg ggaaggggga 750
cagagagggg cctccctctt gccctggact ctccatcag cctcctggaa 800
ctgcacagcc ctctctttca cctgttccat cctgtgcaga tgacacacag 850
ctcaggagcc ccatagcctg gggggggctg gcagagccac accccaagtg 900
cctgtgacca gagggttcca gtcagcggct cactcctcca gggcactttc 950
aggaaagggg tttagctag tgttttctct cgcctttaat gacctcagcc 1000

ccgcctgcag tggctagaag ccagcaggtg cccatgtgct actgacaagt 1050
 gcttcagctt ccccccggcc cgggtcagga cgtgggagcc gctattatct 1100
 cggctctctg ccaaaagctc gggggggcca ccacacctgc cctgtgcagc 1150
 cggacccggac caggtctctg tgtctcact caggtttgct tccctctgtc 1200
 ccactgtgtg atgactggg ggcacacacc ctgtgcaggt ggctctctgg 1250
 ctgctcccg tgggtgtcagg ggggggctgg tgcctatggc acttctctct 1300
 tgcctccacc cctgggcagca ggggaagggt ttgcctgaca acacccagct 1350
 ttaagttaac attctgcagt cgttaactag gaagctctgg cagggcaggy 1400
 ctgcctccatg gctcccagac ctgtctctgt ccgagtgtat tataaaatcg 1450
 tggggcgagat gcccggctcg ggatctctgt tggagacgga ataaatgttt 1500
 tctcattcaa ag 151.

0010: 162
 0011: 214
 0012: PKT
 0013: Homo sapiens

0000: 162
 Met Gly Ser Gly Ala Tyr Gly Ala Ala Lys Ala Gly Gly Ser Phe
 1 5 10 15
 Asp Leu Arg Arg Phe Leu Thr Gln Pro Gln Val Val Ala Arg Ala
 20 25 30
 Val Cys Leu Val Phe Ala Leu Ile Val Phe Ser Cys Ile Tyr Gly
 35 40 45
 Glu Gly Tyr Ser Asn Ala His Glu Ser Lys Gln Met Tyr Cys Val
 50 55 60
 Phe Asn Arg Asn Glu Asp Ala Cys Arg Tyr Gly Ser Ala Ile Gly
 65 70 75
 Val Leu Ala Phe Leu Ala Ser Ala Phe Phe Leu Val Val Asp Ala
 80 85 90
 Tyr Phe Pro Gln Ile Ser Asn Ala Thr Asp Arg Lys Tyr Leu Val
 95 100 105
 Ile Gly Asp Leu Leu Phe Ser Ala Leu Trp Thr Phe Leu Trp Phe
 110 115 120
 Val Gly Phe Cys Phe Leu Thr Asn Gln Trp Ala Val Thr Asn Pro
 125 130 135
 Lys Asp Val Leu Val Gly Ala Asp Ser Val Arg Ala Ala Ile Thr
 140 145 150

Phe Ser Phe Phe Ser Ile Phe Ser Trp Gly Val Leu Ala Ser Leu
155 160 165

Ala Tyr Gln Arg Tyr Lys Ala Gly Val Asp Asp Phe Ile Gln Asn
170 175 180

Tyr Val Asp Pro Thr Pro Asp Pro Asn Thr Ala Tyr Ala Ser Tyr
185 190 195

Pro Gly Ala Ser Val Asp Asn Tyr Gln Gln Pro Pro Phe Thr Gln
200 205 210

Asn Ala Glu Thr Thr Glu Gly Tyr Gln Pro Pro Pro Val Tyr
215 220

<211> 163

<211> 14

<211> RNA

<211> Artificial Sequence

<212>

<212> Synthetic oligonucleotide probe

<213> 163

tggtcttcgc attgatactgt ttct 24

<214> 164

<214> 20

<214> DNA

<214> Artificial Sequence

<215>

<215> Synthetic oligonucleotide probe

<216> 164

gtatattgag cggcggttag 20

<217> 165

<217> 21

<217> DNA

<217> Artificial Sequence

<218>

<218> Synthetic oligonucleotide probe

<219> 165

ctgaaggatga tggctgcact cac 23

<220> 166

<220> 23

<220> DNA

<220> Artificial Sequence

<221>

<221> Synthetic oligonucleotide probe

<401> 166
ccaggagggt catgggaaag tcc 23

<210> 167
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<401> 167
ccaggagggt aagcagatgt actgggtgtt caacggcaac gaggatgct 50

<210> 163
<211> 3143
<212> DNA
<213> Homo sapiens

<400> 163
gagccaccta cctgtctcg aggcaggcc tgcaggggct catcggccag 50
agggtgatac gtgagcagaa ggatgcccgt ggccaggccc ccccaggctg 100
ctggcgggga gggggacgga ggtgatggcg aggaagcgga gccagagggg 150
atgttcgaag cctgtgagga ctccaaagaa aaagcccggg gctacctcgg 200
ccagggtccc cgtttctgga tgcctggcct gctcgtgctg gcttcggcgg 250
gggtgctaact ctggctattc ctagggtaca aggcggaggt gatggtcaga 300
cagggtgtaact caggcagctc gctgtgtaact aatcgccact tctcccagga 350
tcttacccgc cgggaatcta gtgccttcgg cagtgaacac gccaaagccc 400
agaagatgct caaggagctc atccaccaga ccgcctggg aaattactac 450
aaatccagct ccgtctattc ctctggggag ggacccctca cctgcttctt 500
ctggctcatt ctccaaatcc ccagccaccg ccggctgatg ctgagccccc 550
aggtgggtga ggcactgctg gtggaggaga tgcctgcac agtcaacaga 600
tcggctgcgg tccctacag ggccagttac gaagtggacc ccgaggggct 650
agtgatcccg gaagccagtg tgaaagacat agctgcattg aattccacgc 700
tgggttgcta ccgtacagc taagtgggac agggccaggt cctccggctg 750
aaggggcctg accacctggc ctccagctgc ctgtggcacc tgcaggggcc 800
caaggacctc atgctcaaac tccgcttgga gtggacgctg gcagagtggc 850
gggaacgaact ggccatgtat gacgtggcgg ggcccctgga gaagaggctc 900
atcacctcgg tgtaaggctg cagccggcag gacccctgg tggaggttct 950

ggcgtcgggg gccatcatgg cggtcgtctg gaagaagggc ctgcacagct 1000
actacgaccc ctctcgtgctc tccgtgcagc cggcggctct ccaggccctgt 1050
gaagtgaacc tgacgctgga caacaggctc gactcccagg gcgtccctag 1100
cacccogtac tccccagct actactcgcc ccaaacccac tgcctctggc 1150
acctcacggc gccctctctg gactacggct tggccctctg gtttgatgcc 1200
tatgcactga ggaggcagaa gtatgatttg ccgtgcaccc agggccagtg 1250
gacgatccag aacaggaggc tctgtggctt gcgcaccttg cagccctacg 1300
ccgagaggat ccccgctggc gccacggccg ggatcaccat caacttcacc 1350
ccccagatct cctcacccg gccccgctgc cgggtgcact atggcttgta 1400
caaccagtcg gacccctgcc ctggagagtt cctctgtctt gtgaatggac 1450
ctctgttccc tgcctgtgat ggggtcaagg actgccccaa cggcctggat 1500
gagagaaaat gcgtttgcag agccacattc cagtgcaaa gggacagcac 1550
atgcattctc ctgccccagg ctctgtgatg gcagcctgat tctctcaacg 1600
gcagcgatga agagcagtcg caggaagggg tgcctatgtg gacattcacc 1650
ttccagcttg aggacccgag ctgcgtgaag aagccccacc ccgagtgtga 1700
tcggcggccc gactgcaggg accgctcgga tgaggagcac tctgactgtg 1750
gcctccaggg cccctccagc cgcattgctg gtggagctgt gcctccagag 1800
ggcgagtggc catggcaggg cagcctccag gtcgggggtc gacacattct 1850
tcgggggggc ctccatcgct accgctgggt gataacagct gcccactgct 1900
cccaggagga cagcatggcc cccacggctg tctggacctg gtcctcgggc 1950
aaggtgtggc agaactcgcg ctggcctgga gaggtgtcct tcaaggtgag 2000
ccgcctgctc ctgcacccgt accacgaaga ggacagccat gactacgacg 2050
tcggcgtgct gcagctccac caccgggttg tgcgctcggc ccgcgtgggc 2100
ccgctctgcc tgcccggcgc ctcccacttc ttcgagcccc gcctgcactg 2150
ctggattacg ggcctggggcg ccttcggcga gggcgcccc atcagcaacg 2200
ctctgcagaa agtggatgtg cagttgatcc cacaggacct gtgcagcgag 2250
gcctatcgct accaggtgac gccacgcatt ctgtgtgcgc gctaccgcaa 2300
gggcaagaag gatgcctgtc agggtgactc aggtggctcg ctggtgtgca 2350

aggcactcag tggccgctgg ttctctggcgg ggcctggtcag ctggggcctg 2400
 ggcctgtggcc ggcctaaata cttcggcgctc tacacccgca tcacaggtgt 2450
 gatcagctgg atccagcaag tggtagcctg aggaactgac cccctgcaca 2500
 gcaggggcaca cctcctggac tcagagagcc cagggcaact gccaagcagg 2550
 gggacaagta ttctggcggg ggggtggggga gagagcaggg cctgtggttg 2600
 caggaggttg catcttctct cgtccctgat gctctctcca gtgatggcag 2650
 caggatggag aagtgcacgc agctgggggt caagacgtcc cctgaggacc 2700
 caggccaca cccagccctt ctgcctcca attctctct ctcctctccc 2750
 tctctcact gctgcctaata gcaaggcagt ggcacagcag caagaatgct 2800
 ggtctacat cccgaggagt gtctgaggtg cgcctcactc tgcacagagg 2850
 ctgtttgggc agccttgctt ccagagagca gattccagct ccggaagccc 2900
 ctggtctaac ctgggactct ggaatggag gtgctcccat cggaggggac 2950
 ctcagagccc ctggagactg ccaggtgggc ctgctgcac tctaagccaa 3000
 aagtgggga agtctgact ccaggtctt tgcctcacc ctcctgcaca 3050
 cctgggccc cccagcccag accctcactg ggaggtgagc tcagctgccc 3100
 ttgggaataa agctgcctga tcaaaaaaaaa aaaaaaaaaa aaa 3143

<110> 169
 <111> 302
 <112> PRT
 <113> Homo sapiens

<400> 169
 Met Pro Val Ala Glu Ala Pro Gln Val Ala Gly Gly Gln Gly Asp
 1 5 10 15
 Gly Gly Asp Gly Glu Glu Ala Glu Pro Glu Gly Met Phe Lys Ala
 20 25 30
 Cys Glu Asp Ser Lys Arg Lys Ala Arg Gly Tyr Leu Arg Leu Val
 35 40 45
 Pro Leu Phe Val Leu Leu Ala Leu Leu Val Leu Ala Ser Ala Gly
 50 55 60
 Val Leu Leu Trp Tyr Phe Leu Gly Tyr Lys Ala Glu Val Met Val
 65 70 75
 Ser Gln Val Tyr Ser Gly Ser Leu Arg Val Leu Asn Arg His Phe
 80 85 90
 Ser Gln Asp Leu Thr Arg Arg Glu Ser Ser Ala Phe Arg Ser Glu

	45	100	105
Thr Ala Lys Ala	Gln Lys Met Leu Lys	Gln Leu Ile Thr Ser	Thr
	110	115	120
Arg Leu Gly Thr	Tyr Tyr Asn Ser Ser	Ser Val Tyr Ser Phe	Gly
	125	130	135
Glu Gly Pro Leu	Thr Cys Phe Phe Trp	Phe Ile Leu Gln Ile	Pro
	140	145	150
Glu His Arg Arg	Leu Met Leu Ser Pro	Gln Val Val Gln Ala	Leu
	155	160	165
Leu Val Glu Glu	Leu Leu Ser Thr Val	Asn Ser Ser Ala Ala	Val
	170	175	180
Pro Tyr Arg Ala	Gln Tyr Glu Val Asp	Pro Glu Gly Leu Val	Ile
	185	190	195
Leu Glu Ala Ser	Val Lys Asp Ile Ala	Ala Leu Asn Ser Thr	Leu
	200	205	210
Gly Cys Tyr Arg	Tyr Ser Tyr Val Gly	Gln Gly Gln Val Leu	Arg
	215	220	225
Leu Lys Gly Pro	Asp His Leu Ala Ser	Ser Cys Leu Trp His	Leu
	230	235	240
Gln Gly Pro Lys	Asp Leu Met Leu Lys	Leu Arg Leu Glu Trp	Thr
	245	250	255
Leu Ala Glu Cys	Arg Asp Arg Leu Ala	Met Tyr Asp Val Ala	Gly
	260	265	270
Pro Leu Glu Lys	Arg Leu Ile Thr Ser	Val Tyr Gly Cys Ser	Arg
	275	280	285
Gln Glu Pro Val	Val Glu Val Leu Ala	Ser Gly Ala Ile Met	Ala
	290	295	300
Val Val Trp Lys	Lys Gly Leu His Ser	Tyr Tyr Asp Pro Phe	Val
	305	310	315
Leu Ser Val Gln	Pro Val Val Phe Gln	Ala Cys Glu Val Asn	Leu
	320	325	330
Thr Leu Asp Asn	Arg Leu Asp Ser Gln	Gly Val Leu Ser Thr	Pro
	335	340	345
Tyr Phe Pro Ser	Tyr Tyr Ser Pro Gln	Thr His Cys Ser Trp	His
	350	355	360
Leu Thr Val Pro	Ser Leu Asp Tyr Gly	Leu Ala Leu Trp Phe	Asp
	365	370	375
Ala Tyr Ala Leu	Arg Arg Gln Lys Tyr	Asp Leu Pro Cys Thr	Gln

380					395					410				
Gly	Gln	Trp	Thr	Ile	Gln	Asn	Arg	Arg	Leu	Cys	Gly	Leu	Arg	Ile
				395					400					405
Leu	Gln	Pro	Tyr	Ala	Glu	Arg	Ile	Pro	Val	Val	Ala	Thr	Ala	Gly
				410					415					420
Ile	Thr	Ile	Asn	Phe	Thr	Ser	Gln	Ile	Ser	Leu	Thr	Gly	Pro	Gly
				425					430					435
Val	Arg	Val	His	Tyr	Gly	Leu	Tyr	Asn	Gln	Ser	Asp	Pro	Cys	Pro
				440					445					450
Gly	Glu	Phe	Leu	Cys	Ser	Val	Asn	Gly	Leu	Cys	Val	Pro	Ala	Cys
				455					460					465
Asp	Gly	Val	Lys	Asp	Cys	Pro	Asn	Gly	Leu	Asp	Glu	Arg	Asn	Cys
				470					475					480
Val	Cys	Arg	Ala	Thr	Phe	Gln	Cys	Lys	Glu	Asp	Ser	Thr	Cys	Ile
				485					490					495
Ser	Leu	Pro	Lys	Val	Cys	Asp	Gly	Gln	Pro	Asp	Cys	Leu	Asn	Gly
				500					505					510
Ser	Asp	Glu	Glu	Gln	Cys	Gln	Leu	Gly	Val	Pro	Cys	Gly	Thr	Pro
				515					520					525
Thr	Phe	Gln	Cys	Glu	Asp	Arg	Ser	Cys	Val	Lys	Lys	Pro	Asn	Pro
				530					535					540
Gln	Cys	Asp	Gly	Arg	Pro	Asp	Cys	Arg	Asp	Gly	Ser	Asp	Glu	Glu
				545					550					555
His	Cys	Asp	Cys	Gly	Leu	Gln	Gly	Pro	Ser	Ser	Arg	Ile	Val	Gly
				560					565					570
Gly	Ala	Val	Ser	Ser	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu
				575					580					585
Gln	Val	Arg	Gly	Arg	His	Ile	Cys	Gly	Gly	Ala	Leu	Ile	Ala	Asp
				590					595					600
Arg	Trp	Val	Ile	Thr	Ala	Ala	His	Cys	Ile	Gln	Glu	Asp	Ser	Met
				605					610					615
Ala	Ser	Thr	Val	Leu	Trp	Thr	Val	Phe	Leu	Gly	Lys	Val	Trp	Gln
				620					625					630
Asn	Ser	Arg	Trp	Pro	Gly	Glu	Val	Ser	Ile	Lys	Val	Ser	Arg	Leu
				635					640					645
Leu	Leu	His	Pro	Tyr	His	Glu	Glu	Asp	Ser	His	Asp	Tyr	Asp	Val
				650					655					660
Ala	Leu	Leu	Gln	Leu	Asp	His	Pro	Val	Val	Arg	Ser	Ala	Ala	Val

665	670	675
Arg Pro Val Cys Leu Pro Ala Arg Ser His Phe Phe Glu Pro Gly		
680	685	690
Leu His Cys Trp Ile Thr Gly Trp Gly Ala Leu Arg Glu Gly Gly		
695	700	705
Pro Ile Ser Asn Ala Leu Gln Lys Val Asp Val Gln Leu Ile Pro		
710	715	720
Gln Asp Leu Cys Ser Glu Ala Tyr Arg Tyr Gln Val Thr Pro Arg		
725	730	735
Met Leu Cys Ala Gly Tyr Arg Lys Gly Lys Lys Asp Ala Cys Gln		
740	745	750
Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Ala Leu Ser Gly Arg		
755	760	765
Trp Phe Leu Ala Gly Leu Val Ser Trp Gly Leu Gly Cys Gly Arg		
770	775	780
Pro Asn Tyr Phe Gly Val Tyr Thr Arg Ile Thr Gly Val Ile Ser		
785	790	795
Trp Ile Gln Gln Val Val Thr		
800		

0010 - 170
 0011 - 1827
 0012 - DNA
 0013 - Homo sapiens

0000 - 170
 gcaacccggg ccagtggaag atccagaaca ggaggtgtg tggcttgccc 50
 atcttgagc cctacgcaga gaggatcccc gtggaggcca cggccgggat 100
 caccatcaac ttcaactccc agatctccct caccgggccc ggtgtgccc 150
 tgcactatgg ctgtgacaac cagtcggacc cctgctctgg agagttccct 200
 tgtctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250
 ccccaacggc ctggatgaga gaaactgggt ttgagagcc acattccagt 300
 gcaagaggga cagcacatgc atctcaactgc ccaagtctg cgatggggcag 350
 cctgattgtc tcaacggcag cgatgaagag cagtccagg aagggggtgc 400
 atgtgggaca ttcaacttcc agtgtgagga ccggagctgc gtgaagaagc 450
 ccaacccgca gtgtgatggg cggcccgact gcagggacgg ctccgatgag 500
 gagaactgtg actgtggcct ccaggggccc tccagccgca ttgttggtgg 550

agatgtgtac tccaggggtg agtggccatg gcaggccagc ctccaggttc 630
 ggggtcgaca catctgtggg ggggcccaca ccgctgaccc ctgggtgata 650
 acagctggcc actgcttcca ggaggacagc atggcctcca cgggtgtgtg 700
 gacgtgttc ctgggcaagg tgtggcagaa ctggcgtgg cctggagagg 750
 tgtcttcaa ggtgagccgc ctgctcctgc acccgtaaca cgaagaggac 800
 agcatgaat accagtggtc gctgctgcag ctgaccaccc cgggtgtgtg 850
 ctgggcggcc gtggcccccg tctgcttgc cggcggttcc caattcttcg 900
 agcccggtcc gcactgtgtg attacgggtt gggggcctt cggcgaggga 950
 ggcaccaca gcaacgctct gcagaaagtg gatgtgcagt tgatccaca 1000
 ggaatgtgtc agcagggcct atcgctacca ggtgacgcca cgcctgtgt 1050
 gtgcgggcta ccgcaagggc aagaaggatg cctgtcaggg tgactcaggt 1100
 ggtcgtgtg tgtgcaaggc actcagtggc cgtcggttcc tggcggggct 1150
 ggtcagctgg ggcctgggtt gtggccggcc caactacttc ggctctaca 1200
 ccgcaccac aggtgtgata agctggatcc agcaagtggg gaactgagga 1250
 actgcctccc tgcaaggcag ggccacctc ctggactcag agagcccagg 1300
 gcaatgcca agcaggggga caagtat 1327

<210> 171
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <225> Synthetic oligonucleotide probe

<400> 171
 taacagctgc ccactgcttc cagg 24

<210> 172
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <225> Synthetic oligonucleotide probe

<400> 172
 taatccagca gtgcaggccg gg 22

<210> 173
 <211> 50
 <212> DNA

<214> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 173

atgacctcca cggtagctgtg gacagtgttc ctgggcaagg tgtggcagaa 50

<214> 174

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 174

atgtatgca ctgaggagga agaag 25

<214> 175

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 175

aggaagagac acagagtcca ttac 25

<214> 176

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 176

agtatgattt gcctgtgacc cagggcaggt ggacgatcca gaacaggagg 50

<214> 177

<211> 1010

<212> DNA

<213> Homo sapiens

<400> 177

ggagaggagg agatctcgtt ctgggggcaag ccgttgacac tcgtccctg 50

ccacggcccg ggctccgtgc cgcacagttt tcattttcca cctctctctg 100

ctcagtcacc ccagcccttg gccagagaaa gggctcttacc ggcggggatt 150

gctggaaaac ccaagagggt gtttttggtt tttaaaactt ctgtttcttg 200

ggaggggggt tggcggggca ggatgagcaa ctccgttcct ctgctctgtt 250

totggagcct ctgtatttgc ttgtgtggg ggagcccggt accttttggt 300
 ccagaggga cggctggaaga taagctccac aaacccaaag ctacacagac 350
 tgaigtcaaa ccattctgtga ggtttaacct ccgacacctc aaggaccag 400
 agcatgaagg atgtatctct tcgttcgggc acagccagcc cttagaagac 450
 tgcagtttca acatgacaga taaaaacctt ttcatcatto accgatggac 500
 gatgagcggg atctttgaaa actggctgca caaacctgtg tcagccctgc 550
 acacaagaga gaaagacgcc aatgtagttg tgggtgactg gctccctctg 600
 gccacccagc ttacacgga tgggttcaat aataccaggg tgggtgggaca 650
 cagcattgoc aggatgctcg actggctgca ggagaaggac gattttctct 700
 tcgggaatgt ccacttgatc ggtacagcc tcggagcgca cgtggccggg 750
 tatgcaggca acttcgtgaa aggaacgggt ggccgaatca caggtttgga 800
 tctgcccggg ccattgtttg aaggggccga catccacaag aggtctctct 850
 cggacgatgc agattttgtg gatgcctccc acacctacac ggttctctc 900
 ggctgagca tgggtattca gatgcctgtg ggccacattg acatctaccc 950
 caatgggggt gacttcagc caggctgtgg actcaacgat gtcttgggat 1000
 caattgcata tggacaatc acagaggttg caaaatgtga gcatgagcga 1050
 gccgtccacc tctttgttga ctctctgttg aatcaggaca agccgagttt 1100
 tgccttcagc tgcactgact ccaatcgctt caaaaagggg atctgtctga 1150
 gctgcggcaa gaaccgttgt aatagcattg gctacaatgc caagaaaatg 1200
 aggaacaaga ggaacagcaa aatgtacctc aaaaaccggg caggcatgoc 1250
 tttcagaggt aaccttcagt cctggagtg tccctgagga aggcctctaa 1300
 tactctcttc ttaataccat gctgcagagc agggcacatc ctagcccagg 1350
 agaagtggcc agcacatcc aatcaaatcg ttgcaaatca gattacactg 1400
 tgcctgtcct aggaaaggga atctttacaa aataaacagt gtggacccct 1450
 aataaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500
 aaaaaaaaaa 1510

<210> 173
 <211> 354
 <212> PRT
 <213> Homo sapiens

<400> 178

Met	Ser	Asn	Ser	Val	Pro	Leu	Leu	Cys	Phe	Trp	Ser	Leu	Cys	Tyr	
1				5					10					15	
Cys	Phe	Ala	Ala	Gly	Ser	Pro	Val	Pro	Phe	Gly	Pro	Glu	Gly	Arg	
				20					25					30	
Leu	Glu	Asp	Lys	Leu	His	Lys	Pro	Lys	Ala	Thr	Gln	Thr	Glu	Val	
				35					40					45	
Lys	Pro	Ser	Val	Arg	Phe	Asn	Leu	Arg	Thr	Ser	Lys	Asp	Pro	Glu	
				50					55					60	
His	Glu	Gly	Cys	Tyr	Leu	Ser	Val	Gly	His	Ser	Gln	Pro	Leu	Glu	
				65					70					75	
Asp	Cys	Ser	Phe	Asn	Met	Thr	Ala	Lys	Thr	Phe	Phe	Ile	Ile	His	
				80					85					90	
Gly	Trp	Thr	Met	Ser	Gly	Ile	Phe	Glu	Asn	Trp	Leu	His	Lys	Leu	
				95					100					105	
Val	Ser	Ala	Leu	His	Thr	Arg	Glu	Lys	Asp	Ala	Asn	Val	Val	Val	
				110					115					120	
Val	Asp	Trp	Leu	Pro	Leu	Ala	His	Gln	Leu	Tyr	Thr	Asp	Ala	Val	
				125					130					135	
Asn	Asn	Thr	Arg	Val	Val	Gly	His	Ser	Ile	Ala	Arg	Met	Leu	Asp	
				140					145					150	
Trp	Leu	Gln	Glu	Lys	Asp	Asp	Phe	Ser	Leu	Gly	Asn	Val	His	Leu	
				155					160					165	
Ile	Gly	Tyr	Ser	Leu	Gly	Ala	His	Val	Ala	Gly	Tyr	Ala	Gly	Asn	
				170					175					180	
Phe	Val	Lys	Gly	Thr	Val	Gly	Arg	Ile	Thr	Gly	Leu	Asp	Pro	Ala	
				185					190					195	
Gly	Pro	Met	Phe	Glu	Gly	Ala	Asp	Ile	His	Lys	Arg	Leu	Ser	Pro	
				200					205					210	
Asp	Asp	Ala	Asp	Phe	Val	Asp	Val	Leu	His	Thr	Tyr	Thr	Arg	Ser	
				215					220					225	
Phe	Gly	Leu	Ser	Ile	Gly	Ile	Gln	Met	Pro	Val	Gly	His	Ile	Asp	
				230					235					240	
Ile	Tyr	Pro	Asn	Gly	Gly	Asp	Phe	Gln	Pro	Gly	Cys	Gly	Leu	Asn	
				245					250					255	
Asp	Val	Leu	Gly	Ser	Ile	Ala	Tyr	Gly	Thr	Ile	Thr	Glu	Val	Val	
				260					265					270	
Lys	Cys	Glu	His	Glu	Arg	Ala	Val	His	Leu	Phe	Val	Asp	Ser	Leu	
				275					280					285	

Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser
290 295 300

Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg
305 310 315

Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg
320 325 330

Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg
335 340 345

Gly Asn Leu Gln Ser Leu Glu Cys Pro
350

<210> 179

<211> 23

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 179

gtgagatga gagagcagtc cac 23

<210> 180

<211> 26

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 180

gcatatccaa cggttcttgc ggcagc 26

<210> 181

<211> 44

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 181

ttgactctct ggtgaatcag gacaagcaga gttttgcctt ccag 44

<210> 182

<211> 3040

<212> DNA

<213> Homo sapiens

<400> 182

cagacgcgtg ggcggacgag tgggcctggg caagggccgg gccgccgggc 50

cgagcgaact cttccctccc ccgccttccc tgtcgcgcctc cgcctgctgg 100
acgcgctgga ggagtggaag agcaccggg ccgcctggg ggcctgacagt 150
cggaagatt tggccgaag aggaagtgtt ctcaaacccc ggcaggtggc 200
gaccaggcca gaccagggg gctcgttgcg tgggggggg ctgtaggcga 250
ggcgcgcccc cagtgcgcag acccgggggt ccaggagcgg gccccgggag 300
agaagagtgc ggcgggggac ggagaaaaa actccaaagt tggcgaaagg 350
cacgcacctt actccgggg tggcgcgccc ccccccccc cagccctggc 400
atccagagta cgggtcgcgc ccgggcccgt gagcccccct ggggaggcgg 450
caccaggag cctggcgccc cggggctccg ccgcgacccc atcgggtaga 500
ccacagaagc tccgggaccc tccgggcacc cctggacagc ccaggatgct 550
gttggccacc ctctctctcc tctctcttgg aggcgtctgt gcccatccag 600
accggattat tttccaaat catgcttgtg aggaaccccc agcagtgctc 650
ctagaagtgc agggcacctt acagaggccc ctggtccggg acagccgcac 700
ctcccttgcg aactgcacct ggctcatctt gggcagcaag gaacagactg 750
ccacctcag gttccagaag ctacacctgg cctgtggctc agagcgctta 800
accctacgct cccctctcca gccactgata tccctgtgtg aggcacctcc 850
cagccctctg cagctgcctg ggggcaact caccatcact tacagctatg 900
ctggggccag agcaccctat ggcacggggt tctgtcttc ctacagccaa 950
gattggtgca tgtgcctgca ggaagagttt cagtgcctga accacggctg 1000
tgtatctgct gtcacagcgt gtgatgggtt tgatgcctgt ggcgatggct 1050
ctgatgaagc aggttcgagc tcagacccct tccctggcct gaccccaaga 1100
ccgctcccc cctgccttg caatgtcac ttggaggact tctatggggt 1150
cttctctct cctggatata cacacctagc ctcagctctc cacccccagt 1200
cctgcctatg gctgctggac ccccatgatg gcggggggct ggccgtggcg 1250
ttcacagccc tggacttggg ctttggagat gcagtgcctg tgtatgaagg 1300
ccctgggccc cctgagagct ccgcactact gcttagtctc acccaactca 1350
gcaatggcaa ggcctgcact gtggagacac tgtctggcca ggcgtgtgtg 1400
tctaccaca cagttgcttg gagcaatggt cgtggcttca atgccacctt 1450
ccatgtggcg ggcatttgt tgccttggga cagacccgtg ggccttaggt 1500

ctggcctggg agctggcgaa ggccaggtg agccttgcta cagtgaggca 1550
 cagcctgttg accgctcatg ggaactgtgt gacggcacag atgaggagga 1600
 ctgcccaggg tggccacctg gacactcccc ctgtgggggt gctggcacct 1650
 ctggtgccc acgctgctac ctgctgtgtg accgctgcaa ctaccagact 1700
 ttctgtgtg atggagcaga tgagagacgg tgtgggcatt ggcagcctgg 1750
 caattccoga tgcggggaag agaagtgggt gtatgagacg tgggtgtgtg 1800
 atgggcagcc agactgtgtg gacggcagtg atgagtggga ctgtccctat 1850
 gttctgcccc gcaaggteat tacagctgca gtcattggca gctagtgtg 1900
 cggcctgttc ctggctcatg cctggggtg cactgcaag ctctatgcca 1950
 ttggaaccca ggagtacagc atctttggcc cctctcccg gatggagggt 2000
 gagattgtgc agcagcaggg acccccttcc tacgggcagc tcattgcccc 2050
 gggctgcctc ccacctgtag aagaatttcc tacagagaat cctaattgata 2100
 actcagtgtt gggcaacctg cgtctctctg tacagatctt accccaggat 2150
 atgaactccag gagggtggcc aggtgcccgc cgtcgtcagc ggggcccgtt 2200
 gatgcagcgc ctggtaagcc gtctccggcg ctgggggttg ctccctcgaa 2250
 ccaacacccc ggtccgggcc tctgaggcca gatcccaggt cacacctctt 2300
 gctgctcccc ttgaggccct agatggtggc acaggtccag ccgtgaggg 2350
 cggggcagtg ggtgggcaag atggggagca ggcaccccca ctgcccacca 2400
 aggtccctct cccatctgtt agcacgtctc cagccccca cactgtccct 2450
 gaagccccag ggcactgccc ctcaactgccc ctagagccat cactattgtc 2500
 tggagtgggt caggccctgt gaggcctgtt gttgcccagc ctggggcccc 2550
 caggaccaac ccggagcccc cctggacccc acacagcagt cctggccctg 2600
 gaagatgagg acgatgtgtt actgggtgca ctggctgagc cgggggtgtg 2650
 ggtagctgag gcagaggatg agccactgtt taactgaggg gacctggggg 2700
 ctctactgag gctctcccc tgggggtctt actcactagt gcacaaacct 2750
 tttagaggtg gtcagcctcc cctccacccc ttcttccct gtcctggat 2800
 ttccaggact tgggtgggct ccgcttgacc ctatgtagct gctataaagt 2850
 taagtgtccc tcaggcaggg agagggtcca cagagtctcc tctgtacgtg 2900

gccatggcca gacaccccag tccttcacc accactgct ccccacgcca 2950
 ccaccatttg ggtggctgtt tttaaaaagt aaagttotta gaggatcata 3000
 ggtctggaca ctccatcctt gccaaaacct taccacaaag tggccttaag 3050
 caccggaatg ccaattaact agagaccctc cagcccccaa ggggaggatt 3100
 tgggcagaac ctgaggtttt gccatccaca atccctccta cagggcctgg 3150
 ctacacaaaa gagtgcacaa aatgcttcta ctccatagct caggcattgc 3200
 ccagtaagtt gaggtcaaaa ataaaggaat catabatctc 3240

<210> 153
 <211> 713
 <212> PFT
 <213> Homo sapiens

<400> 153
 Met Leu Leu Ala Thr Leu Leu Leu Leu Leu Leu Gly Gly Ala Leu
 1 5 10 15
 Ala His Pro Asp Arg Ile Ile Phe Pro Asn His Ala Cys Glu Asp
 20 25 30
 Pro Pro Ala Val Leu Leu Glu Val Gln Gly Thr Leu Gln Arg Pro
 35 40 45
 Leu Val Arg Asp Ser Arg Thr Ser Pro Ala Asn Cys Thr Trp Leu
 50 55 60
 Ile Leu Gly Ser Lys Glu Gln Thr Val Thr Ile Arg Phe Gln Lys
 65 70 75
 Leu His Leu Ala Cys Gly Ser Glu Arg Leu Thr Leu Arg Ser Pro
 80 85 90
 Leu Gln Pro Leu Ile Ser Leu Cys Glu Ala Pro Pro Ser Pro Leu
 95 100 105
 Gln Leu Pro Gly Gly Asn Val Thr Ile Thr Tyr Ser Tyr Ala Gly
 110 115 120
 Ala Arg Ala Pro Met Gly Gln Gly Phe Leu Leu Ser Tyr Ser Gln
 125 130 135
 Asp Trp Leu Met Cys Leu Gln Glu Glu Phe Gln Cys Leu Asn His
 140 145 150
 Arg Cys Val Ser Ala Val Gln Arg Cys Asp Gly Val Asp Ala Cys
 155 160 165
 Gly Asp Gly Ser Asp Glu Ala Gly Cys Ser Ser Asp Pro Phe Pro
 170 175 180
 Gly Leu Thr Pro Arg Pro Val Pro Ser Leu Pro Cys Asn Val Thr

185	190	195
Leu Glu Asp Phe Tyr Gly Val Phe Ser Ser Pro Gly Tyr Thr His 200 217		
Leu Ala Ser Val Ser His Pro Gln Ser Cys His Trp Leu Leu Asp 215 228		
Pro His Asp Gly Arg Arg Leu Ala Val Arg Phe Thr Ala Leu Asp 230 246		
Leu Gly Phe Gly Asp Ala Val His Val Tyr Asp Gly Pro Gly Pro 245 255		
Pro Glu Ser Ser Arg Leu Leu Arg Ser Leu Thr His Phe Ser Asn 260 270		
Gly Lys Ala Val Thr Val Glu Thr Leu Ser Gly Gln Ala Val Val 275 288		
Ser Tyr His Thr Val Ala Trp Ser Asn Gly Arg Gly Phe Asn Ala 290 306		
Thr Tyr His Val Arg Gly Tyr Cys Leu Pro Trp Asp Arg Pro Cys 305 315		
Gly Leu Gly Ser Gly Leu Gly Ala Gly Glu Gly Leu Gly Glu Arg 320 330		
Cys Tyr Ser Glu Ala Gln Arg Cys Asp Gly Ser Trp Asp Cys Ala 335 345		
Asp Gly Thr Asp Glu Glu Asp Cys Pro Gly Cys Pro Pro Gly His 350 361		
Phe Pro Cys Gly Ala Ala Gly Thr Ser Gly Ala Thr Ala Cys Tyr 365 375		
Leu Pro Ala Asp Arg Cys Asn Tyr Gln Thr Phe Cys Ala Asp Gly 380 390		
Ala Asp Glu Arg Arg Cys Arg His Cys Gln Pro Gly Asn Phe Arg 395 408		
Cys Arg Asp Glu Lys Cys Val Tyr Glu Thr Trp Val Cys Asp Gly 410 420		
Gln Pro Asp Cys Ala Asp Gly Ser Asp Glu Trp Asp Cys Ser Tyr 425 435		
Val Leu Pro Arg Lys Val Ile Thr Ala Ala Val Ile Gly Ser Leu 440 450		
Val Cys Gly Leu Leu Leu Val Ile Ala Leu Gly Cys Thr Cys Lys 455 465		
Leu Tyr Ala Ile Arg Thr Gln Glu Tyr Ser Ile Phe Ala Pro Leu		

473	475	480
Ser Arg Met Glu Ala Glu Ile Val Gln Gln Gln Ala Pro Pro Ser		
485	490	495
Tyr Gly Gln Leu Ile Ala Gln Gly Ala Ile Pro Pro Val Glu Asp		
500	505	510
Phe Pro Thr Glu Asn Pro Asn Asp Asn Ser Val Leu Gly Asn Leu		
515	520	525
Arg Ser Leu Leu Gln Ile Leu Arg Gln Asp Met Thr Pro Gly Gly		
530	535	540
Gly Pro Gly Ala Arg Arg Arg Gln Arg Gly Arg Leu Met Arg Arg		
545	550	555
Leu Val Arg Arg Leu Arg Arg Trp Gly Leu Leu Pro Arg Thr Asn		
560	565	570
Thr Pro Ala Arg Ala Ser Glu Ala Arg Ser Gln Val Thr Pro Ser		
575	580	585
Ala Ala Pro Leu Gln Ala Leu Asp Gly Gly Thr Gly Pro Ala Arg		
590	595	600
Glu Gly Gly Ala Val Gly Gly Gln Asp Gly Glu Gln Ala Pro Pro		
605	610	615
Leu Pro Ile Lys Ala Pro Leu Pro Ser Ala Ser Thr Ser Pro Ala		
620	625	630
Pro Thr Thr Val Pro Glu Ala Pro Gly Pro Leu Pro Ser Leu Pro		
635	640	645
Leu Glu Pro Ser Leu Leu Ser Gly Val Val Gln Ala Leu Arg Gly		
650	655	660
Arg Leu Leu Pro Ser Leu Gly Pro Pro Gly Pro Thr Arg Ser Pro		
665	670	675
Pro Gly Pro His Thr Ala Val Leu Ala Leu Glu Asp Glu Asp Asp		
680	685	690
Val Leu Leu Val Pro Leu Ala Glu Pro Gly Val Trp Val Ala Glu		
695	700	705
Ala Gln Asp Glu Pro Leu Leu Thr		
710		

<110> 184

<111> 23

<112> DNA

<113> Artificial Sequence

<200>

<223> Synthetic oligonucleotide probe

4400+ 184
gggtgtact gtggagacac 20

4410+ 185
4411+ 18
4412+ DNA
4413+ Artificial Sequence

4420+
4423+ Synthetic oligonucleotide probe

4430+ 185
gttgggtcat tacagctg 18

4440+ 186
4441+ 23
4442+ DNA
4443+ Artificial Sequence

4450+
4453+ Synthetic oligonucleotide probe

4460+ 186
gttacttagg agcagtcaca ctc 23

4470+ 187
4471+ 23
4472+ DNA
4473+ Artificial Sequence

4480+
4483+ Synthetic oligonucleotide probe

4490+ 187
tgactgtgtc tgcacaatct cag 23

4500+ 188
4501+ 45
4502+ DNA
4503+ Artificial Sequence

4510+
4513+ Synthetic oligonucleotide probe

4520+ 188
gggtatttgt tgctttggga cagacctgt ggcttaggct ctggc 45

4530+ 189
4531+ 643
4532+ DNA
4533+ Homo sapiens

4540+ 189
cgagctgggc gagaagtagg ggagggcggg gctccgccgc ggtggcggtt 50
gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100

gaaagtgtgt ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150
 aataaaaacat cgcaccttct gcttcagtgt gaaaggccac gtgaagatgc 200
 tgcgggtggc actaactgtg acatctatga ccttttttat catcgacaaa 250
 ggcctcgaac catatattgt taccactgga ttggaagtcg ccgttatctt 300
 atttttcata ctttttatgt tactcagact tgatcgatta atgaagtggc 350
 tatcttggcc ttgccttgat attatcaact cactggtaac aacagtattc 400
 atgctcctcg tatctgtgtt ggcactgata ccagaaacca caacattgac 450
 agttgggtgga ggggtgttgc cacttgtagc agcagtatgc tgtcttgccg 500
 acggggccct tatttacggg aagcttcgtt tcaatccag cggtccttac 550
 cagaaaaagc ctgtgcctga aaaaaaagaa gttttgtaat tttatattac 600
 ttttagtttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650
 aaaaaaaaaa aaa 663

<210> 190
 <211> 192
 <212> PRT
 <213> Homo sapiens

<400> 190
 Met Asp Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe
 1 5 10 15
 Ser Val Lys Gly His Val Lys Met Leu Arg Leu Ala Leu Thr Val
 20 25 30
 Thr Ser Met Thr Phe Phe Ile Ile Ala Gln Ala Pro Glu Pro Tyr
 35 40 45
 Ile Val Ile Thr Gly Phe Glu Val Thr Val Ile Leu Phe Phe Ile
 50 55 60
 Leu Leu Tyr Val Leu Arg Leu Asp Arg Leu Met Lys Trp Leu Phe
 65 70 75
 Trp Pro Leu Leu Asp Ile Ile Asn Ser Leu Val Thr Thr Val Phe
 80 85 90
 Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr Thr Thr
 95 100 105
 Leu Thr Val Gly Gly Gly Val Phe Ala Leu Val Thr Ala Val Cys
 110 115 120
 Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn
 125 130 135

Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu
 140 145 150

Val Leu

<210> 131
 <211> 495
 <212> DNA
 <213> Homo sapiens

<220>
 <221> feature
 <222> 75, 212, 234, 487
 <223> unknown base

<400> 141
 ggggagaag taggggaggg cgtgttcgcg cgcggtggcg gttgctatcg 50
 ttitggagaa cctactcagg cagccagntg agaagagttg agggaaagtg 100
 ctctgtgtgg gtctgcagac gogatggata acgtgcagcc gaaaataaaa 150
 cctggcgcct tctgcttcag tctgaaaggg caogtgaaga tctgcgggct 200
 ggcactaaat gngacatcta tgaacttttt tatnctgcga caagcccttg 250
 aacacatat tcttatcaat ggatttgaag tcacggttat cttatttttc 300
 atatttttat atgtactcag acttgatoga ttaatgaagt ggttattttg 350
 ggccttgcct gatattatca accactggt aacaacagta ttcctgctca 400
 tcttatctgt gttggcactg ataccagaaa ccacaacatt gacagtctgt 450
 gggggggtgt ttgcacttgt gacagcagta tctgtntttg ccgac 495

<210> 142
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Synthetic oligonucleotide probe

<400> 142
 cgttttgcag aactactca ggcag 25

<210> 143
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Synthetic oligonucleotide probe

<400> 192
cctccaccaa ctgtcaatgt tgtgg 25

<210> 194
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 194
aaagtgtgtg tgctgggtct gcagacggga tggataacgt 40

<210> 195
<211> 1-79
<212> DNA
<213> Homo sapien

<400> 195
cagccccggg cggcggggga gtgctgtgag cgggggtgca ggaacgggacg 50
ggacgggcta ggttggggga gccccgggg cccggcgtg ggcattgggg 100
caatggcccc ggctgtgtgt ctgcctctgc tggcccagtg gctcctgggc 150
gcgcccccgg agctggcccc cgggccttcc acgtgcccc tcgggggtggc 200
cgaggcaccg aacgggttag ttgggcccc cccgggaccc gggacccctg 250
ccgagcgcca cggcagcggc ttggcgctcg cctgggagcc tgccttggcg 300
tcccccgggg ggcgcgcaca attcttggcc atggttagaca acctgcaggg 350
ggactctggc cggggctact acctggagat gctgatcggg accccccggc 400
agaagctaca gattctcgtt gacctggaa gcagtaactt tgccttggca 450
ggatccccgc acctctacat agacacgtac ttgacacag agaggtctag 500
cacataccgc tccaaagggc ttgacgtcac agtgaagtac acacaaggaa 550
gcttgaaggg attcgttggg gaagacctcg tcacctccc caaaggcttc 600
aatacttctt ttcttgcaca cattgcacct atttttgaat cagagaattt 650
ctttttgcct gggattaaat ggaatggaat acctggccta gcttatgcca 700
caattgacca gccatcaagt tctctggaga cctctcttga ctccctgggtg 750
acacaagcaa acatcccaaa cgttttctcc atgcagatgt gtggagccgg 800
cttgcacctt gctggatctg ggaccaacgg aggtagtctt gtcttgggtg 850
gaattgaacc aagtttgtat aaaggagaca tctggtatac cctattaag 900
gaagagtgtt actaccagat agaaattctg aaattggaaa ttggaggcca 950

aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000
acagtggcac cagctgctg cgcctgcacc agaaggtgtt tgatcggtg 1050
gtggaagctg tggcccgccc atctctgatt ccagaattct ctgatggctt 1100
ctggaactggg tccagctgg cgtgctggac gaattcggaa acaccttgg 1150
cttacttccc taaaatctcc atctacctga gagacgagaa ctccagcagg 1200
tcattccgta tcacaatcct gctcagctt tacattcagc ccattgatgg 1250
ggcgggctg aattatgaat gttacgatt cggcatttcc ccattccaaa 1300
atgctctgg gatcggtgac aaggctgatg agggcttcta cgtcatctc 1350
gacgagccc agaagagggg gggcttcgca ggcagccct gtgcagaaat 1400
tgcaggtgt gcagtgtctg aaatttcggg gcctttctca acagaggatg 1450
tagccagcaa ctgtgtccc gctcagctt tgagcgagcc catttctgg 1500
attgtgtct atgcgtcct gagcgtctgt ggagccatcc tctctgtct 1550
aatgtctct ctgtctctg cgttcgggtg ccagcctgc ccccgtagc 1600
ctgaggtct ccattgatgag tctctctgg ccagacatg ctggaaatga 1650
atagccaggg ctgacctcaa gcaacctga actcagctat taagaaaatc 1700
acatttcag ggcagcagcc gggatcgatg gtggcgcttt ctctgtgac 1750
cacccgtct ccattctctg tctgtccca gatgcctct agattcactg 1800
tcttttgatt ctgattttc aagctttcaa atcttccta ctccaagaa 1850
aaataattaa aaaaaaaact tcattctaa 1879

<210> 196
<211> 513
<212> PRT
<213> Homo sapien

<400> 126
Met Gly Ala Leu Ala Arg Ala Leu Leu Leu Pro Leu Leu Ala Glr.
1 5 10 15
Trp Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr
20 25 30
Leu Pro Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro
35 40 45
Thr Pro Gly Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu
50 55 60

Ala	Leu	Ala	Leu	Glu	Pro	Ala	Leu	Ala	Ser	Pro	Ala	Gly	Ala	Ala	
				65					70					75	
Asn	Phe	Leu	Ala	Met	Val	Asp	Asn	Leu	Gln	Gly	Asp	Ser	Gly	Arg	
				80					85					90	
Gly	Tyr	Tyr	Leu	Glu	Met	Leu	Ile	Gly	Thr	Pro	Pro	Gln	Lys	Leu	
				95					100					105	
Gln	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	Val	Ala	Gly	
				110					115					120	
Thr	Pro	His	Ser	Tyr	Ile	Asp	Thr	Tyr	Phe	Asp	Thr	Glu	Arg	Ser	
				125					130					135	
Ser	Thr	Tyr	Arg	Ser	Lys	Gly	Phe	Asp	Val	Thr	Val	Lys	Tyr	Thr	
				140					145					150	
Gln	Gly	Ser	Trp	Thr	Gly	Phe	Val	Gly	Gln	Asp	Leu	Val	Thr	Ile	
				155					160					165	
Pro	Lys	Gly	Phe	Asn	Thr	Ser	Phe	Leu	Val	Asn	Ile	Ala	Thr	Ile	
				170					175					180	
Phe	Glu	Ser	Glu	Asn	Phe	Phe	Leu	Pro	Gly	Ile	Lys	Trp	Asn	Gly	
				185					190					195	
Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Thr	Leu	Ala	Lys	Pro	Ser	Ser	Ser	
				200					205					210	
Leu	Glu	Thr	Phe	Phe	Asp	Ser	Leu	Val	Thr	Gln	Ala	Asn	Ile	Pro	
				215					220					225	
Asn	Val	Phe	Ser	Met	Gln	Met	Cys	Gly	Ala	Gly	Leu	Pro	Val	Ala	
				230					235					240	
Gly	Ser	Gly	Thr	Asn	Gly	Gly	Ser	Leu	Val	Leu	Gly	Gly	Ile	Glu	
				245					250					255	
Pro	Ser	Leu	Tyr	Lys	Gly	Asp	Ile	Trp	Tyr	Thr	Pro	Ile	Lys	Glu	
				260					265					270	
Glu	Trp	Tyr	Tyr	Gln	Ile	Glu	Ile	Leu	Lys	Leu	Glu	Ile	Gly	Gly	
				275					280					285	
Gln	Ser	Leu	Asn	Leu	Asp	Cys	Arg	Glu	Tyr	Asn	Ala	Asp	Lys	Ala	
				290					295					300	
Ile	Val	Asp	Ser	Gly	Thr	Thr	Leu	Leu	Arg	Leu	Pro	Gln	Lys	Val	
				305					310					315	
Phe	Asp	Ala	Val	Val	Glu	Ala	Val	Ala	Arg	Ala	Ser	Leu	Ile	Pro	
				320					325					330	
Glu	Phe	Ser	Asp	Gly	Phe	Trp	Thr	Gly	Ser	Gln	Leu	Ala	Cys	Trp	
				335					340					345	

Thr Asn Ser Glu Thr Pro Trp Ser Tyr Phe Pro Lys Ile Ser Ile	350	355	360
Tyr Leu Arg Asp Glu Asn Ser Ser Arg Ser Phe Arg Ile Thr Ile	365	370	375
Leu Pro Gln Leu Tyr Ile Gln Pro Met Met Gly Ala Gly Leu Asn	380	385	390
Tyr Glu Cys Tyr Arg Phe Gly Ile Ser Pro Ser Thr Asn Ala Leu	395	400	405
Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr Val Ile Phe Asp	410	415	420
Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro Cys Ala Glu	425	430	435
Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe Ser Thr	440	445	450
Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser Glu	455	460	465
Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly	470	475	480
Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Leu Pro Phe Arg	485	490	495
Cys Glu Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser	500	505	510
Ser Leu Val Arg His Arg Trp Lys	515		

<210> 147

<211> 21

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 147

ggcagaagct acagattctc g 21

<210> 148

<211> 19

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 148

ggaaattgga ggccaaagc 19

42117 199
42118 20
42119 DNA
42120 Artificial Sequence

42200
42200 Synthetic oligonucleotide probe

44000 124
ggatgtagcc agcaactgtg 20

42119 199
42119 19
42120 DNA
42120 Artificial Sequence

42300
42300 Synthetic oligonucleotide probe

44000 100
ggcttggctc gttctcttc 19

42119 199
42119 18
42120 DNA
42120 Artificial Sequence

42300
42300 Synthetic oligonucleotide probe

44000 94
gttctctgagc ctggatgg 18

42119 199
42119 21
42120 DNA
42120 Artificial Sequence

42300
42300 Synthetic oligonucleotide probe

44000 211
gaaagaacta cctcgttgg tc 22

42119 199
42119 24
42120 DNA
42120 Artificial Sequence

42300
42300 Synthetic oligonucleotide probe

44000 205
tgaagaaag ttcagcacct gttg 24

42100 204

4211 - 47
4212 - DNA
4213 - Artificial Sequence

4220 -
4221 - Synthetic oligonucleotide probe

4400 - 244
gggtcgaagg gctttgacgt cacagtgaag tacacacaag gaagctg 47

4410 - 245
4411 - 1439
4412 - DNA
4413 - Homo sapiens

4400 - 245
gggtcgaagg ttgggagggt gaagggcccg ggcccggttc caggcctgtg 50
caggcctgtg cggcagcccg ctggcggcga tccagggcgg tggggggcct 100
cggggggcga cgggaggcgg ggccggcctg gaggcctgtg tggggggcga 150
cgggtcctgt ctggggcgct acgtgctgtg ctactacaac ctgggtgaagg 200
tccggcgtgt cggcggcctg ggcaacctgt gggcccgccac ggccgtgggt 250
cggggcgcca acagcggcct cggaaagatg acggcgctgg agctggcgcg 300
cggggcgcg cggcgtgggt tggcctggcg cagccaggag cggggggagg 350
cggcctgctt cgaacctcgg caggagagtg ggaacaatga ggtcatcttc 400
ctgctctgg acctggccag cctggcctcg gtgcggggct ttggcaactg 450
cttctcgag cctgagccac ggttggaact cctcatccac aatgcgggta 500
tcaattctgt tggccggacc cgtgaggcgt ttaacctgt gcttcgggtg 550
aacctctct gccccttctt gctgacacat ctgctgtgtg cttgcctgaa 600
cggcctgtgt cctagcccg tgggtggtgt agcctcagct gcccaactgt 650
cgggaactct tgacttcaaa cgcctggacc gcccagtggt gggctggcgg 700
caggagctgt gggcatatgt tgacaactaag ctggctaatt tactgtttgt 750
cggcgaact gcccaaccag ttgagggcac tggcgtccac tgcctatgag 800
cccacccagg gcttgtgaac tggagcctgt tcttgccaca tgttcttgga 850
tggctgcccc cacttttctg cccattggct tggctggtgt tccgggcacc 900
aaggaggcgt gccacagcac cctgtattg tgcctacaa gagggcctcg 950
agccctcag tgggagatat ttgcccaact gccatgtgga agaggtgctt 1000
ccagctgccc gaggcgaacc gccagcccat cggctatggg aggccagcaa 1050

gaggetggca gggettgggc ctggggagga tgetgaaccb gatgaagabc 1100
 aacagtctga ggaactagag gcccacatt ctctaagpac ccccacccct 1150
 gaggagccca cagttttctca accctacccc agccctcaga gctcaccaga 1200
 ttgtctaaag atgaagcacc gaattcagga taaagttgag cctgagatcc 1250
 agctctctca accctcagga caggatgctt ggcattggac ttcattggtcc 1300
 ttgaaaaact cggatgtgtg tgaggccatg ccttggaac tgacgggttt 1350
 ctgatcttga cctcctgtgt taattctctg ggccccaagg tgtgccttgg 1400
 acatctcttt ccttggttga aggaataatg ggtgattatt tcttcctgag 1450
 agtgacagta accccagatg gagagatagg ggtatgctag acactgtgct 1500
 tctcgaaat ttggtatgag tattctcagg ccccacccc attgattctg 1550
 atcagctctg gaggagagga agggagtctg caatgtgatg cactgcacac 1600
 attgagaatt agtgaactga tccctttgca accgtctaga taggtagtta 1650
 aattaccccc atgttaatga agcggaatta ggtcccgag ctaagggaat 1700
 cgcctagggt ctacactga gtaggaggag ggcctgggat ctgaacccaa 1750
 gggcttgagg ccaggggcga ctgcctgaag atgggtgctg agaagttagt 1800
 ccagggaggg cagctggtat ccaggtgcac catgggagta aggggaagcc 1850
 ttcggggggg atgcagggtt ggggtcatct gtatctgaag cccctcggaa 1900
 taaagcgtgt tgatcgccaa aaaaaaaaaa aaaaaaaaaa 1939

<210> 206
 <211> 377
 <212> PRT
 <213> Homo sapiens

<210> 206
 Met Glu Ala Leu Leu Leu Gly Ala Gly Leu Leu Leu Gly Ala Tyr
 1 5 10 15
 Val Leu Val Tyr Tyr Asn Leu Val Lys Ala Pro Pro Cys Gly Gly
 20 25 30
 Met Gly Asn Leu Arg Gly Arg Thr Ala Val Val Thr Gly Ala Asn
 35 40 45
 Ser Gly Ile Gly Lys Met Thr Ala Leu Glu Leu Ala Arg Arg Gly
 50 55 60
 Ala Arg Val Val Leu Ala Cys Arg Ser Glu Glu Arg Gly Glu Ala
 65 70 75

Ala	Ala	Phe	Asp	Leu	Arg	Gln	Glu	Ser	Gly	Asn	Asn	Glu	Val	Ile	80	85	90
Phe	Met	Ala	Leu	Asp	Leu	Ala	Ser	Leu	Ala	Ser	Val	Arg	Ala	Phe	95	100	105
Ala	Thr	Ala	Phe	Leu	Ser	Ser	Glu	Pro	Arg	Leu	Asp	Ile	Leu	Ile	110	115	120
His	Asn	Ala	Gly	Ile	Ser	Ser	Cys	Gly	Arg	Thr	Arg	Glu	Ala	Phe	125	130	135
Asn	Leu	Leu	Leu	Arg	Val	Asn	His	Ile	Gly	Pro	Phe	Leu	Leu	Thr	140	145	150
His	Leu	Leu	Leu	Pro	Cys	Leu	Lys	Ala	Cys	Ala	Pro	Ser	Arg	Val	155	160	165
Val	Val	Val	Ala	Ser	Ala	Ala	His	Cys	Arg	Gly	Arg	Leu	Asp	Phe	170	175	180
Lys	Arg	Leu	Asp	Arg	Pro	Val	Val	Gly	Trp	Arg	Gln	Glu	Leu	Arg	185	190	195
Ala	Tyr	Ala	Asp	Thr	Lys	Leu	Ala	Asn	Val	Leu	Phe	Ala	Arg	Glu	200	205	210
Leu	Ala	Asn	Gln	Leu	Glu	Ala	Thr	Gly	Val	Thr	Cys	Tyr	Ala	Ala	215	220	225
His	Pro	Gly	Pro	Val	Asn	Ser	Glu	Leu	Phe	Leu	Arg	His	Val	Pro	230	235	240
Gly	Trp	Leu	Arg	Pro	Leu	Leu	Arg	Pro	Leu	Ala	Trp	Leu	Val	Leu	245	250	255
Arg	Ala	Pro	Arg	Gly	Gly	Ala	Gln	Thr	Pro	Leu	Tyr	Cys	Ala	Leu	260	265	270
Gln	Glu	Gly	Ile	Glu	Pro	Leu	Ser	Gly	Arg	Tyr	Phe	Ala	Asn	Cys	275	280	285
His	Val	Glu	Glu	Val	Pro	Pro	Ala	Ala	Arg	Asp	Asp	Arg	Ala	Ala	290	295	300
His	Arg	Leu	Trp	Glu	Ala	Ser	Lys	Arg	Leu	Ala	Gly	Leu	Gly	Pro	305	310	315
Gly	Glu	Asp	Ala	Glu	Pro	Asp	Glu	Asp	Pro	Gln	Ser	Glu	Asp	Ser	320	325	330
Glu	Ala	Pro	Ser	Ser	Leu	Ser	Thr	Pro	His	Pro	Glu	Glu	Pro	Thr	335	340	345
Val	Ser	Gln	Pro	Tyr	Pro	Ser	Pro	Gln	Ser	Ser	Pro	Asp	Leu	Ser	350	355	360

Lys Met Thr His Arg Ile Gln Ala Lys Val Glu Pro Glu Ile Gln
 365 370 375

Leu Ser

<110> 117
 <111> 24
 <112> DNA
 <113> Artificial Sequence

<120>
 <121> Synthetic oligonucleotide probe

<400> 207
 attcatggcc ttggacttgg ccag 24

<110> 208
 <111> 24
 <112> DNA
 <113> Artificial Sequence

<120>
 <121> Synthetic oligonucleotide probe

<400> 208
 acctccagtgg cctcaagctg gttg 24

<110> 209
 <111> 41
 <112> DNA
 <113> Artificial Sequence

<120>
 <121> Synthetic oligonucleotide probe

<400> 209
 atttctgagc cctgagccac ggttggacat cctcatccac aatgc 45

<110> 210
 <112> 3/16
 <112> DNA
 <113> Homo sapiens

<400> 210
 gaaggagaca gctctctggg gggcaggggt tccctgcttc tgetgctct 50
 gctcatcatg ggaggcatgg ctcaggactc ccgcgccag atcctagtcc 100
 aacccnagga ccagctgttc cagggccctg gccctgccag gatgagctgc 150
 ccagcctcag gccagccacc tcccaccatc cgttggttgc tgaatgggca 200
 gcccttgagc atggtgcccc cagaccacac ccactctctg cctgatggga 250
 cctttctgtt gtacagccc cctgcctggg gacatgccca cgtatggccag 300

gccctgtcca cagacctggg tgtctacaca tgtgaggcca gcaacccggct 350
 tggcacggga gtcajcajag ggcctcggct gtctgtgggt gtccctccggg 400
 agjatttcca gatccagcct cgggacatgg tggctgtgggt gggtgagcag 450
 tttactctgg aatgtgggca gccctggggc caccacagag ccacagctctc 500
 atgggtgaaa gatgggaaac cccctggccct ccagcccgga aggcacacag 550
 tgcctggggg gtccctgctg atggcaagag cagagaagag tgaagaaggg 600
 acctacatgt gtgtggccac caacagcgca ggacataggg agagcccgcc 650
 agccccgggt tccatccagg agccccagga ctacacggag cctgtggagc 700
 ttctggctgt gagaattcag ctggaaaatg tgacaactgc gaacccggat 750
 cctgcagagg gccccaagcc tagacgggg gtgtgggtca gctggaaagt 800
 cagtggccct gctggcctg cccaatctta cagggccttg ttcaggaccc 850
 agaetgcccc gggagggcag ggagctcctt gggcagagga gctgctggcc 900
 ggtcggcaga ggcagagct cggaggccct cactggggcc aagactaaga 950
 gttcaaatg agaccatcct ctggccgggg ccaggccct gacagcaacg 1000
 tgcctgcctct gaggctgcgc gaaaaagtgc ccagtgcctc acctcaggaa 1050
 gtjactctaa agcctggcaa tggcaactgc tttgtgagct gggctcccac 1100
 acctgcctgaa aaccacaatg gcacatccg tggctaccag gtctggagcc 1150
 tgggcaacac atcaactgca ccagccaaat ggaactgagt tggtgagcag 1200
 acccagctgg aaatcgccac ccatatgca ggtctctact gctgccaagt 1250
 ggtcgcagtc actggctgct gagctgggga gccacgtaga cctgtctgcc 1300
 tccctttaga gcaggccatg gagcgagcca cccaagaacc cagtgagcat 1350
 ggtccctgga cccctggagca gctgagggct accttgaagc ggcctgaggt 1400
 cattgcacac tgcggtgttg cactctggct gctgctctct ggcacccgcg 1450
 tgtgtatcca ccgcgggggc agagctaggg tgcacctggg ccacaggtctg 1500
 tacagatata ccagtgagga tgcacctcta aaacacagga tggatcacag 1550
 tgaactccag tgggtggcag acactgggc cccacctct ggtctctggg 1600
 acctgagcag cagcagcagc ctccagcagc ggtgggggc gcatgcctgg 1650
 gacccactag actgtcgtcg ctcttgctc tctgggact ccgaagccc 1700

ggggtgtgccc ctggtttccag acaccagcac tttttatggc tccctcctcg 1750
ctgagcttgc ctccagtaac ccagcccaggc caagtcccca ggtcccagct 1800
gtcaggcgcc tcccaaccca gctggcccag ctctccagcc cctgttccag 1850
cccagacagc ctctgcagcc gcaggggact ctctctccc cgtttgtctc 1900
tggcccctgc agaggcttgg aaggccaaaa agaagcagga gctgcagcat 1950
gccaacagtt cccactgct cgggggcagc cactccctgg agtcggggc 2000
ctgtgagtta ggaaatagag gtcccaagaa cctttcccaa agcccaggag 2050
ctgtgcccc agctcttggt gcttgjgggg cctggggacc gaaactcccc 2100
agtcctcaa atgagctggt tactctcat ctccctccag caccctctt 2150
tctcatgaa actccccaa ctccagctca acagacccag cctcgggtgg 2200
caccacagge cccctcccc atctgtctgc cagcagcccc catccccatc 2250
cttagccct gcagtcccc tagcccccag gctcttccc tctctggccc 2300
cagcccagct tccagtccgc tgtccagctc ctcaactgca cccctggggg 2350
aggatcaaga cagctgtctg accctgagg aggtagccct gtgcttggaa 2400
ctcagtgagg gtgaggagac tcccaggaa agcgtctctc ccattgccaag 2450
ggctccctca cccccacca cctatgggta catcagctc ccaacagcct 2500
cagagttcac ggacatgggc aggaactggag gagggtggg gccaagggg 2550
ggagtcttgc tgtgcccacc tgggcctgc ctcaaccca ccccagcga 2600
gggtccctta gccaatggct ggggctcagc ctctgaggac aatgcggcca 2650
ggccagagc cagcttctc agtcctccg atggctcctt cctcgtgat 2700
gtccactctg cccgggcctt ggccagtggct gtggatagct ctggttccgg 2750
cttagagccc agggaggcag actgcctctt catagatgdc ccattacctc 2800
cccccacag ggatgagat tccctgacc ccaactctc cctgcccctg 2850
tgggagtggg ggccagacty gtggaagac atggaggtca gccacacca 2900
ggggttggga agggggatgc ctccctgggc cctgactct cagatctctt 2950
cccagagaag ccagctccac tgtcgtatgc ccaaggctgg tgcctctctt 3000
gtagattact cctgaacct gtccctgaga ctccccagac gggaatcaga 3050
accactctc ctgtccacc acaagacctg ggcgtgggtg tgtgggtctt 3100
ggcctgtgtt tctctgcagc tggggtccac ctccccaagc ctccagagag 3150

ttctccctcc acgattgtga aaacaaatga aaacaaaatt agagcaaagc 3300
 tgaactggag ccttcaggga gcaaaacatc atctccacct gaactctaga 3350
 cactgcttcc tctctgtgca catccactcc caaccaccagg ttgttttggc 3400
 ctgaggagca ggcctgcctg ctgctcttcc cccaccattt ggatcacagg 3450
 aagtggagga gccagaggtg cctttgtgga ggacagcagt ggcctgtggg 3500
 agagggctgt ggaggaagga gcttcttgga ggcctctctc agccttacct 3550
 gggccctctc ctatagagaag agctcaactc tctcccaacc tcaccatgga 3600
 aagaaaataa ttatgaatgc cactgaggca ctgaggccct acctcatgca 3650
 aaaaagggg ttcaaggctg ggctatagca ggcctgtgaa ggaagggagg 3700
 tatgagacg taggtcaaaa gcaccatctt cgtactgttg tcaactatgag 3750
 cttaagaaat ttgatccat aaatggtta aaaaaaaaaa aaaaaaaaaa 3700
 aaaaaaaaaa aaaaaa 3716

<010> 111
 <011> 005
 <012> PRT
 <013> Homo sapiens

<000> 111
 Met Gly Gly Met Ala Gln Asp Ser Pro Pro Gln Ile Leu Val His
 1 5 10 15
 Pro Gln Asp Gln Leu Phe Gln Gly Pro Gly Pro Ala Arg Met Ser
 20 25 30
 Cys Gln Ala Ser Gly Gln Pro Pro Pro Thr Ile Arg Trp Leu Leu
 35 40 45
 Asn Gly Gln Pro Leu Ser Met Val Pro Pro Asp Pro His His Leu
 50 55 60
 Leu Pro Asp Gly Thr Leu Leu Leu Leu Gln Pro Pro Ala Arg Gly
 65 70 75
 His Ala His Asp Gly Gln Ala Leu Ser Thr Asp Leu Gly Val Tyr
 80 85 90
 Thr Cys Glu Ala Ser Asn Arg Leu Gly Thr Ala Val Ser Arg Gly
 95 100 105
 Ala Arg Leu Ser Val Ala Val Leu Arg Glu Asp Phe Gln Ile Gln
 110 115 120
 Pro Arg Asp Met Val Ala Val Val Gly Glu Gln Phe Thr Leu Glu
 125 130 135

Cys Gly Pro Pro Trp Gly His Pro Glu Pro Thr Val Ser Trp Trp	140	145	150
Lys Asp Gly Lys Pro Leu Ala Leu Gln Pro Gly Arg His Thr Val	155	160	165
Ser Gly Gly Ser Leu Leu Met Ala Arg Ala Glu Lys Ser Asp Glu	170	175	180
Gly Thr Tyr Met Cys Val Ala Thr Asn Ser Ala Gly His Arg Glu	185	190	195
Ser Arg Ala Ala Arg Val Ser Ile Gln Glu Pro Gln Asp Tyr Thr	200	205	210
Glu Pro Val Glu Leu Leu Ala Val Arg Ile Gln Leu Glu Asn Val	215	220	225
Thr Leu Leu Asn Pro Asp Pro Ala Glu Gly Pro Lys Pro Arg Pro	230	235	240
Ala Val Trp Leu Ser Trp Lys Val Ser Gly Pro Ala Ala Pro Ala	245	250	255
Gln Ser Tyr Thr Ala Leu Phe Arg Thr Gln Thr Ala Pro Gly Gly	260	265	270
Gln Gly Ala Pro Trp Ala Glu Glu Leu Leu Ala Gly Trp Gln Ser	275	280	285
Ala Glu Leu Gly Gly Leu His Trp Gly Gln Asp Tyr Glu Phe Lys	290	295	300
Val Arg Pro Ser Ser Gly Arg Ala Arg Gly Pro Asp Ser Asn Val	305	310	315
Leu Leu Leu Arg Leu Pro Glu Lys Val Pro Ser Ala Pro Pro Gln	320	325	330
Glu Val Thr Leu Lys Pro Gly Asn Gly Thr Val Phe Val Ser Trp	335	340	345
Val Pro Pro Pro Ala Glu Asn His Asn Gly Ile Ile Arg Gly Tyr	350	355	360
Gln Val Trp Ser Leu Gly Asn Thr Ser Leu Pro Pro Ala Asn Trp	365	370	375
Thr Val Val Gly Glu Gln Thr Gln Leu Gln Ile Ala Thr His Met	380	385	390
Pro Gly Ser Tyr Cys Val Gln Val Ala Ala Val Thr Gly Ala Gly	395	400	405
Ala Gly Glu Pro Ser Arg Pro Val Cys Leu Leu Leu Glu Gln Ala	410	415	420

Met	Glu	Arg	Ala	Thr	Gln	Glu	Pro	Ser	Glu	His	Gly	Pro	Trp	Thr	425	430	435
Leu	Glu	Gln	Leu	Arg	Ala	Thr	Leu	Lys	Arg	Pro	Glu	Val	Ile	Ala	440	445	450
Thr	Cys	Gly	Val	Ala	Leu	Trp	Leu	Leu	Leu	Gly	Thr	Ala	Val		455	460	465
Cys	Ile	His	Arg	Arg	Arg	Arg	Ala	Arg	Val	His	Leu	Gly	Pro	Gly	470	475	480
Leu	Tyr	Arg	Tyr	Thr	Ser	Glu	Asp	Ala	Ile	Leu	Lys	His	Arg	Met	485	490	495
Asp	His	Ser	Asp	Ser	Gln	Trp	Leu	Ala	Asp	Thr	Trp	Arg	Ser	Thr	500	505	510
Ser	Gly	Ser	Arg	Asp	Leu	Ser	Ser	Ser	Ser	Ser	Leu	Ser	Ser	Arg	515	520	525
Leu	Gly	Ala	Asp	Ala	Arg	Asp	Pro	Leu	Asp	Cys	Arg	Arg	Ser	Leu	530	535	540
Leu	Ser	Trp	Asp	Ser	Arg	Ser	Pro	Gly	Val	Pro	Leu	Leu	Pro	Asp	545	550	555
Thr	Ser	Thr	Phe	Tyr	Gly	Ser	Leu	Ile	Ala	Glu	Leu	Pro	Ser	Ser	560	565	570
Thr	Pro	Ala	Arg	Pro	Ser	Pro	Gln	Val	Pro	Ala	Val	Arg	Arg	Leu	575	580	585
Pro	Pro	Gln	Leu	Ala	Gln	Leu	Ser	Ser	Pro	Cys	Ser	Ser	Ser	Asp	590	595	600
Ser	Leu	Cys	Ser	Arg	Arg	Gly	Leu	Ser	Ser	Pro	Arg	Leu	Ser	Leu	605	610	615
Ala	Pro	Ala	Glu	Ala	Trp	Lys	Ala	Lys	Lys	Lys	Gln	Glu	Leu	Gln	620	625	630
His	Ala	Asn	Ser	Ser	Pro	Leu	Leu	Arg	Gly	Ser	His	Ser	Leu	Glu	635	640	645
Leu	Arg	Ala	Cys	Glu	Leu	Gly	Asn	Arg	Gly	Ser	Lys	Asn	Leu	Ser	650	655	660
Gln	Ser	Pro	Gly	Ala	Val	Pro	Gln	Ala	Leu	Val	Ala	Trp	Arg	Ala	665	670	675
Leu	Gly	Pro	Lys	Leu	Leu	Ser	Ser	Ser	Asn	Glu	Leu	Val	Thr	Arg	680	685	690
His	Leu	Pro	Pro	Ala	Pro	Leu	Phe	Pro	His	Glu	Thr	Pro	Pro	Thr	695	700	705

Gln Ser Gln Gln Thr Gln Pro Pro Val Ala Pro Gln Ala Pro Ser	710	715	720
Ser Ile Leu Leu Pro Ala Ala Pro Ile Pro Ile Leu Ser Pro Cys	725	730	735
Ser Pro Pro Ser Pro Gln Ala Ser Ser Leu Ser Gly Pro Ser Pro	740	745	750
Ala Ser Ser Arg Leu Ser Ser Ser Ser Leu Ser Ser Leu Gly Gln	755	760	765
Asp Gln Asp Ser Val Leu Thr Pro Glu Glu Val Ala Leu Cys Leu	770	775	780
Glu Leu Ser Glu Gly Glu Glu Thr Pro Arg Asn Ser Val Ser Pro	785	790	795
Met Pro Arg Ala Pro Ser Pro Pro Thr Thr Tyr Gly Tyr Ile Ser	800	805	810
Val Pro Thr Ala Ser Glu Phe Thr Asp Met Gly Arg Thr Gly Gly	815	820	825
Gly Val Gly Pro Lys Gly Gly Val Leu Leu Cys Pro Pro Arg Pro	830	835	840
Cys Leu Thr Pro Thr Pro Ser Glu Gly Ser Leu Ala Asn Gly Trp	845	850	855
Gly Ser Ala Ser Glu Asp Asn Ala Ala Ser Ala Arg Ala Ser Leu	860	865	870
Val Ser Ser Ser Asp Gly Ser Phe Leu Ala Asp Ala His Phe Ala	875	880	885
Arg Ala Leu Ala Val Ala Val Asp Ser Phe Gly Phe Gly Leu Glu	890	895	900
Pro Arg Glu Ala Asp Cys Val Phe Ile Asp Ala Ser Ser Pro Pro	905	910	915
Ser Pro Arg Asp Glu Ile Phe Leu Thr Pro Asn Leu Ser Leu Pro	920	925	930
Leu Trp Glu Trp Arg Pro Asp Trp Leu Glu Asp Met Glu Val Ser	935	940	945
His Thr Gln Arg Leu Gly Arg Gly Met Pro Pro Trp Pro Pro Asp	950	955	960
Ser Gln Ile Ser Ser Gln Arg Ser Gln Leu His Cys Arg Met Pro	965	970	975
Lys Ala Gly Ala Ser Pro Val Asp Tyr Ser	980	985	

<211> 212
<211> 24
<211> DNA
<211> Artificial Sequence

<220>
<222> Synthetic oligonucleotide probe

<400> 112
gaaaggacot acatgtgtgt ggcc 24

<211> 115
<211> 14
<211> DNA
<211> Artificial Sequence

<220>
<222> Synthetic oligonucleotide probe

<400> 214
actgacotto cagctgagcc acac 24

<211> 214
<211> 30
<211> DNA
<211> Artificial Sequence

<220>
<222> Synthetic oligonucleotide probe

<400> 114
aatactacac ggagcctgtg gagcttctgg ctgtgcgaat tcagctggaa 50

<210> 214
<211> 1749
<212> RNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1969, 1987
<223> unknown base

<400> 214
ctccacaggt gtccagcgcc cagaatgggg cttctggtec tgcctatgggg 50
ttgctctgtg ctccacaggt atgaagccct ggagggccca gaggaaatca 100
gaggggttcca aggggacact gtgtccctgc agtgcaccta caggggaagag 150
ctgaggggacc accggaagta ctggtgcagg aaggggtggga tccctctctc 200
tcgtctctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
agggcagggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300

acctgttga acctaccct gcaagacgt ggggagtact ggtgtggggt 350
 cgaaaaaagg ggcacgatg agtatttact gatctctctg ttogtctctc 400
 caggacctg ctgtctccc tccctctctc ccacctcca gctctgggt 450
 acaacacgct tgcagccaa ggcaaaagt cagcaaaccc agcccccagg 500
 attgactct ctggggtct acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgaggccct ccattgccag ggaattccca gtacgggcac 600
 gaaaggactt ctcagtcac aggaacctct cctcaccag cgaactctcc 650
 tctgcaggg agctcccgcc ccccatgca gctggactcc acctcagcag 700
 aggcacccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750
 atcccgatgg tccgataact ggcacagtc ctgggtgtgc tgagcctct 800
 gtacgcgcga ggcctgatg ccttctgcag ccacctgtc ctgtggagaa 850
 aggaagtcca acaggccacg gagacacaga ggaaacagaa gttctggctc 900
 tcaacttga ctggggagga aaaggaaacc cctccacagg cccctgaggg 950
 ggactgtat ccgatgctc cctccacac acctgaggag gagctgggt 1000
 tctcgaagtt tctctcagg tagggcagga ggcctctctg gcacggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagcttc 1100
 cacctacgcc tcagagtcca gctgcacgga cccagggtt ccccccaccc 1150
 tccacagggt cctctcttgc atgttcacgc ctgaactaga agcgtctgcc 1200
 agccctggag cccagagcgg tggccttctt cttccggctg gagaactggga 1250
 catccctgat aggtccacat cctggggcag agtaccagga tctgacccct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
 aggaacctct gggcctcatg cccagtgtcg gaccttgct tctccact 1400
 ccagacccca ccttgtcttc cctccctggc gtctcagac ttagtccac 1450
 ggtctctctg acagctggc gatgaagagg agcatgtctg gctgagactg 1500
 ggattctggc cctctcttga accacctgca tccagccctt caggaagcct 1550
 gtgaaaaacg tgattcttg cccacccag accacccaaa accatctctg 1600
 ggcctggctg aggaactctga attctaacaa tgcacagtga ctgtcgcact 1650
 tgagttcag ggcagtggg cctgatgaac gctcacaccc cttcagctta 1700
 gactctgat ttgggtgtg acgtctccac ctgccccaat agatctgtc 1750

tgtctggagac accagatcca cgtggggact cccctgaggo ctgctaagtc 1800
 caggcoctgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgccct cccctgggcca tgccttcttg 1900
 cctttggaaa aaatgatgaa gaaaaccttg gctccttccct tgtctggaaa 1950
 gggtaacttg cctatgggtt ctggctggcta gagagaaaag tagaaaacca 2000
 cagtgcaagt aggtgtctaa cacagaggag agtaggaaca gggcggatad 2050
 ctgaaggtga ctccgagtc ccagcccttg agaaggggtc gggggctggg 2100
 gtaagttagc acaactacta tttttttct ctaccatta ctattgttt 2150
 ctaagacaga atctctgtgt gctgcacagg ctggagtcca gtcgcacgat 2200
 ctgcaaacct cgcctctctgg gttcaagtga ttctttctgc tcagctccc 2250
 cagtagctgg gattacaggg accgaacacc acactgggt aatttttgta 2300
 cctctagtag agatgggggt tcacatgtt ggcacaggct gtcttgaact 2350
 ctgacatca aatgagctc ctgcttcagt ctcccaaat gcggggatta 2400
 caggcatgag ccactgtgtc tggccctatt cctttcaaaa agtgaaaatta 2450
 agagtgtctc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctccc agagactatc attatttct 2550
 cctgtgttac ctcttccac cctttttctt cccacataat tgcgcgggtg 2600
 cctttttaca gagcaattat ctgttatata caactttgta ccttgcttt 2650
 cccaccttat cgttccatca ctttatcca gcaattctct gtgttttaca 2700
 cacttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<110> 216

<111> 332

<112> PRT

<113> Homo sapiens

<400> 216

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly
1				5				10					15	

Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
			20					25					30	

Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp
			35					40					45	

His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50					55					60				
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Gln	Gly	Gln	Glu	Thr	Met
				65					70					75
Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu
				80					85					90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr
				95					100					105
Trp	Cys	Gly	Val	Gln	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile
				110					115					120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser
				125					130					135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala
				140					145					150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu
				155					160					165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Gln
				170					175					180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr
				185					190					195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro
				200					205					210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala
				215					220					225
Gln	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg
				230					235					240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu
				245					250					255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His
				260					265					270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln
				275					280					285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys
				290					295					300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro
				305					310					315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val
				320					325					330
Ser	Ala													

4210 217
4211 24
4212 DNA
4213 Artificial Sequence

4220
4221 Synthetic oligonucleotide probe

4400 217
ccctgagtg cactacag gaag 24

4210 218
4211 24
4212 DNA
4213 Artificial Sequence

4220
4221 Synthetic oligonucleotide probe

4400 218
ctgtctccc ctgcttggt gtgg 24

4210 219
4211 27
4212 DNA
4213 Artificial Sequence

4220
4221 Synthetic oligonucleotide probe

4400 219
gggtgaggaa gggtyggatc ctctctctc gtgctctgg ccacatc 47

4210 220
4211 350
4212 DNA
4213 Homo sapiens

4400 220
ctgtgaactaa aagctggcct agcaggccag ggagtgccgc tgcaggcgtg 50
gggttggcag gaggccaga gccagagcag acagccgaga aacaggtgga 100
cagtggtgaaa gaaccagtgg ctctgctctg ttgcccaggc tagagtgtac 150
tggcgtgata atagctcact gcagcctcag actcctggac ttgagaaatc 200
ctctgctctt agcctcctgc atatctggga ctccaggggt gcactcaagc 250
cctgttctctt ctcttctgt gagtggacca cggaggctgg tgagctgctt 300
gtcatcccaa agctcagctc tgagccagag tgggtggtggc tccacctctg 350
ccgcggccat agaagccagg agcagggtc tcagaaggcg gtggtgcccc 400

actgggatca tgttgttggc cctgggtctgt ctgctcagct gcttgetacc 450
 ctccagtgag gccaaactct acggctggtg tgaactggcc agagtgcctac 500
 atgaattcgg gctggacgga tacgggggat acagcctggc tgaactgggtc 550
 tgccttgctt atttcacaag cggtttcaac gcagctgctt tggactacga 600
 ggtgatggg agcaccacaa acgggatctt ccagatcaac agccggaggt 650
 ggtgcagcaa cctcaccacg aacgtcccca acgtgtgcgc gatgtaactgc 700
 ccagatttgt tgaattctaa cctcaaggat acggttatct gtgcacatgaa 750
 gataacccaa gagctccagg gtctgggcta ctgggaggcc tggaggcctc 800
 actgcacggg aaaagacctc actgaatggg tggatggctg tgaattctag 850
 catggaagga accatgcaca gcagctggg aaatgtggtt tggttcctga 900
 cctaggcttg ggaagacaag ccagcgaata aaggatggtt gaactgaaa 950

<210> 221
 <211> 146
 <212> PRT
 <213> Homo sapiens

<210> 221
 Met Leu Leu Ala Leu Val Cys Leu Leu Ser Cys Leu Leu Pro Ser
 1 5 10 15
 Ser Glu Ala Lys Leu Tyr Gly Arg Cys Glu Leu Ala Arg Val Leu
 20 25 30
 His Asp Phe Gly Leu Asp Gly Tyr Arg Gly Tyr Ser Leu Ala Asp
 35 40 45
 Trp Val Cys Leu Ala Tyr Phe Thr Ser Gly Phe Asn Ala Ala Ala
 50 55 60
 Leu Asp Tyr Glu Ala Asp Gly Ser Thr Asn Asn Gly Ile Phe Gln
 65 70 75
 Ile Asn Ser Arg Arg Trp Cys Ser Asn Leu Thr Pro Asn Val Pro
 80 85 90
 Asn Val Cys Arg Met Tyr Cys Ser Asp Leu Leu Asn Pro Asn Leu
 95 100 105
 Lys Asp Thr Val Ile Cys Ala Met Lys Ile Thr Gln Glu Pro Gln
 110 115 120
 Gly Leu Gly Tyr Trp Glu Ala Trp Arg His His Cys Gln Gly Lys
 125 130 135
 Asp Leu Thr Glu Trp Val Asp Gly Cys Asp Phe
 140 145

<211> 132
<211> 134
<211> DNA
<212> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 132
gggataatgt tggtagccct ggta 24

<211> 133
<211> 135
<211> DNA
<212> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 133
ggaggtaga ccagtcaga gag 23

<211> 134
<211> 45
<211> DNA
<212> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 134
atgactacta cactccaagt gaggccaagc tatacggtag ttgtg 45

<211> 135
<211> 1049
<211> DNA
<212> Homo sapiens

<400> 135
aacagatgac cgggacggg cgcacgggc gccaccatga gtccccgtc 50
atcactatgt tagctgggc tctcgtctt cgcctcttc tcagccggc 100
ccagcactg gctgtacct gccaagctgt cgtcgggtgg gagcatctca 150
gaggaggaga cgtgcgagaa actcaagggc ctgattcaga gccaggtgca 200
gaggtcctaa cggaaacctg aagtcattga ctcgggtggc ccgggtgccc 250
acctgtccat tagggagtgc cagtaccagt tcgggaaccc ggcttggaac 300
tctccctaac tgaactctt gcccgctctt gccaaagggtg tgacgcaagg 350
gaatcggag ggggccttcg tctaaggcat ctcttcggca ggtgtggcct 400
ttgcagtga cggggcgtgc agcagtggg agctggagaa gtgcggctgt 450

gacaggacag tgcattgggt cagccacacag ggcttccagt ggtcaggatg 500
 ctctgacaac atcgcttacg gtgtggcttc ctacacagtc tttgtggatg 550
 tgcgggagag aagcaagggg gctctgtcca gcagagccct catgaacctc 600
 cacaacaatg aggcgggcag gaaggccatc ctgacacaca tgcgggtgga 650
 atgcaagtgc caggggtgtc caggctcctg tgaggtaaag acgttgttgg 700
 gagtcgtgac gctcttcctg cagggtgggtc accactgaa ggagaagtct 750
 gatgtgcca ctgaggtgga gccacggcgc gtgggtctct ccagggcact 800
 ggtaccacgc aacgcacagt tcaagccgca cacagatgag gacctgtgt 850
 acctggagcc tagcccgac ctctgtgagc aggacatgag cagcggcgtg 900
 ctgggcacga ggggcggcac atgcaacaag acgtccaagg ccactgacgg 950
 ctgtgagctg ctgtgtgtg gccggggttc ccacacggcg cagggtggagc 1000
 tggctgaacg ctgcagctgc aaattccact ggtgtgtctt cgtcaagtgc 1050
 cggcagtgc accggctcgt ggagttgcac acgtgcgat gacggctgc 1100
 ctaggccctg gccggcaacc acctagtggc ccagggaagg ccgataatct 1150
 aaacagtctc ccaccacctc ccccaagaga tactggttgt attctctgtc 1200
 ccggtcttgt tttgggtcc ccatgttatt tattgcgaa accaggcagg 1250
 caaccccaag ggcaccaacc agggctccc caaagcctgg gctcttctgg 1300
 ctgcactga ccaaggggac ctgtctgtg ccgtgtgtg cccgcattgt 1350
 gctgcacttg accactcagt tgttatctgt gtccgtcttc ctacttgag 1400
 acctagggtg gactaacaag gactattacc accacatggc tactgacgt 1450
 gtcattgggg aagagggggc ctctatggcg ggaaaatagg tactgacttg 1500
 atggaagtc caccctctgg aaaaaagaac tcttaactct ccagcacaca 1550
 tacacatgga ctctggcag ctgagacta gaagccatgt ctctcaaatg 1600
 ccttgagaaa gggaacaagc agataccagg tcaagggcac caggttcatt 1650
 tcagccctta catggacagc tagaggttcg atatctgttg gtccttcacg 1700
 gcaagaagag ggagatgaga gcaagagac actgaagtcc caccctagaa 1750
 ccagcctgc ccagcctgc cctgggaag aggaaaacta accactcccc 1800
 agaccacct aggcaggcat ataggctgc atcttgacc agggatcccc 1850

actatgccctt tgcagtcattg ccagagtcac ctttcacaga gctgttccctc 1999
 catgaaactg aaaaacacac acacacacac acacacacac acacacacac 1999
 acacacacac ggcacacac acacacctgc gagagagagg gaggaaggg 2000
 ctgtgccttt gcagtcattg ccagagtcac ctttcacaga cgtttccctc 2044

42100 216
 42110 351
 42120 PRT
 42130 Homo sapiens

44000 216
 Met Ser Pro Arg Ser Cys Leu Arg Ser Leu Arg Leu Leu Val Phe
 1 5 10 15
 Ala Val Phe Ser Ala Ala Ala Ser Asn Trp Leu Tyr Leu Ala Lys
 20 25 30
 Leu Ser Ser Val Gly Ser Ile Ser Glu Glu Glu Thr Cys Glu Lys
 35 40 45
 Leu Lys Gly Leu Ile Gln Arg Gln Val Gln Met Cys Lys Arg Asn
 50 55 60
 Leu Glu Val Met Asp Ser Val Arg Arg Gly Ala Gln Leu Ala Ile
 65 70 75
 Glu Glu Cys Gln Tyr Gln Phe Arg Asn Arg Arg Trp Asn Cys Ser
 80 85 90
 Thr Leu Asp Ser Leu Pro Val Phe Gly Lys Val Val Thr Gln Gly
 95 100 105
 Thr Arg Glu Ala Ala Phe Val Tyr Ala Ile Ser Ser Ala Gly Val
 110 115 120
 Ala Phe Ala Val Thr Arg Ala Cys Ser Ser Gly Glu Leu Glu Lys
 125 130 135
 Cys Gly Cys Asp Arg Thr Val His Gly Val Ser Pro Gln Gly Phe
 140 145 150
 Gln Trp Ser Gly Cys Ser Asp Asn Ile Ala Tyr Gly Val Ala Phe
 155 160 165
 Ser Gln Ser Phe Val Asp Val Arg Glu Arg Ser Lys Gly Ala Ser
 170 175 180
 Ser Ser Arg Ala Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg
 185 190 195
 Lys Ala Ile Leu Thr His Met Arg Val Glu Cys Lys Cys His Gly
 200 205 210
 Val Ser Gly Ser Cys Glu Val Lys Thr Cys Trp Arg Ala Val Pro

	215	220	225
Pro Phe Arg Gln Val Gly His Ala Leu Lys Glu Lys Phe Asp Gly	230	235	240
Ala Thr Glu Val Glu Pro Arg Arg Val Gly Ser Ser Arg Ala Leu	245	250	255
Val Pro Arg Asn Ala Gln Phe Lys Pro His Thr Asp Glu Asp Leu	260	265	270
Val Tyr Leu Glu Pro Ser Pro Asp Phe Cys Glu Gln Asp Met Arg	275	280	285
Ser Gly Val Leu Gly Thr Arg Gly Arg Thr Cys Asn Lys Thr Ser	290	295	300
Lys Ala Ile Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly Phe	305	310	315
His Thr Ala Gln Val Glu Leu Ala Glu Arg Cys Ser Cys Lys Phe	320	325	330
His Thr Cys Cys Phe Val Lys Cys Arg Gln Cys Gln Arg Leu Val	335	340	345
His Leu His Thr Cys Arg	350		

<210> 227

<211> 23

<212> RNA

<213> Artificial Sequence

<210>

<212> Synthetic oligonucleotide probe

<210> 217

tgatgagctg caaatccac tgg 23

<211> 213

<212> RF

<213> RNA

<214> Artificial Sequence

<210>

<212> Synthetic oligonucleotide probe

<210> 218

tggtagaaga ctgtttaaat taccggcc 28

<211> 219

<212> 41

<213> RNA

<214> Artificial Sequence

<220>

4223 - Synthetic oligonucleotide probe

4400 - 209

ttggttcttca agtgccggga gtgcagcgg ctggtggagt t 41

4210 - 210

4211 - 1155

4212 - DNA

4213 - Homo sapiens

4400 - 230

gggacg gtg ggaggacgg tggggggaag cgtgggggga cgtgtgggt 50

gggtgcatgc atcgccatgg acaccaccag gtacagcaag tgggggggca 100

gacccagagga ggtccccgga gggccctggg gacgtgggt gcaactggagc 150

aggagaaccc tcttcttggc cctggctgtc ctgggtacaa cagtcccttg 200

ggatgttatt ctgagtatcc tattgtccaa ggccctccac gagcgcgagg 250

cgatgattga cggccacgac ctgctgagga caaacgcctc gaagcagacg 300

gctggctgg gtgcacctga ggaggaggtc ggagactgac acagctgctg 350

ctcgggacg caggcgacgc tgcagaccac ggcggcgagg cttggggagg 400

cgcaggcgaa gctgatggag caggagagcg cctggcgga actgctgag 450

cgtgtgacc agggtctggc tgaagccggc agggggcctg aggaactccg 500

cactgagctg tccggggcgc tggaggccgt gaggctccag aacaaactct 550

gctgagctg ccccaactgc tggctgtctc tggagggctc ctgctacttc 600

ttctctgtgc caaagacgac gtggggcgcg ggcaggatc actgcccaga 650

tgcacagcg cactgggga tggctggggg cctggatgag cagggtctcc 700

tcaactcgaa caggctggc cgtggttact ggcggggctc gagggtctg 750

cggcatctg gcaaggctca gggctaccag tgggtggag gactctctct 800

cagcttcagc cactgggaac agggagagcc caatgacgtc tggggggcg 850

agaactgtgt catgatgctg cacacggggc tgtgggaaga cgcacccgtg 900

gacagcgaga aggaaggctg gatctgtgag aaaaggcaca actgctgacc 950

cggccagtg cctgggagcc ggcgccattg cagcatgtc tatctgggg 1000

gctgctccc tccctggctc ctggagctga ttgcbaaaga gtctttttct 1050

tctccatcca ccgtctgtga gtctcagaaa caattggccc aacatagccc 1100

tgtccagccc agtgccctgg ctctgggacc tccatgcga cctcatccta 1150

astccactca cgcagaccca acctaacctc cactagctcc aaaatccctg 1200
 cctctggctc ccctgcatat gcttcacatt ctctccctaa ccaagggttag 1250
 gtcactgagg actggagctg ttctgttttc tgcattttc caccaaaactg 1300
 gaagctgttt ttgcagctg aggaagcacc aataaatatt tgagaaatga 1350
 aaaaa 1355

02100 231
 02110 293
 02120 PRT
 02130 Homo sapiens

04000 231
 Met Asp Thr Thr Arg Tyr Ser Lys Trp Gly Gly Ser Ser Glu Glu
 1 5 10 15
 Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg
 20 25 30
 Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp
 35 40 45
 Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg
 50 55 60
 Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser
 65 70 75
 Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp
 80 85 90
 Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr
 95 100 105
 Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Gln Glu
 110 115 120
 Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala
 125 130 135
 Glu Ala Gly Arg Gly Arg Glu Asp Val Arg Thr Glu Leu Phe Arg
 140 145 150
 Ala Leu Glu Ala Val Arg Leu Gln Asn Asn Ser Cys Glu Pro Cys
 155 160 165
 Pro Thr Ser Trp Leu Ser Phe Glu Gly Ser Cys Tyr Phe Phe Ser
 170 175 180
 Val Pro Lys Thr Thr Trp Ala Ala Ala Gln Asp His Cys Ala Asp
 185 190 195
 Ala Ser Ala His Leu Val Ile Val Gly Gly Leu Asp Glu Gln Gly
 200 205 210

Phe Leu Thr Arg Asn Thr Arg Gly Arg Gly Tyr Trp Leu Gly Leu
215 220 225

Arg Ala Val Arg His Leu Gly Lys Val Gln Gly Tyr Gln Trp Val
230 235 240

Asp Gly Val Ser Leu Ser Phe Ser His Trp Asn Gln Gly Glu Pro
245 250 255

Asn Asp Ala Trp Gly Arg Glu Asn Cys Val Met Met Leu His Thr
260 265 270

Gly Leu Trp Asn Asp Ala Pro Cys Asp Ser Glu Lys Asp Gly Trp
275 280 285

Ile Cys Glu Lys Arg His Asn Cys
290

<212> 2A2

<211> 74

<213> DNA

<215> Artificial Sequence

<216>

<218> Synthetic oligonucleotide probe

<2000> 232

ggaggaactg tgatcatgatg ctgg 24

<212> 233

<211> 74

<213> DNA

<215> Artificial Sequence

<216>

<218> Synthetic oligonucleotide probe

<2000> 133

gtttcttgaga ctacagagag gtgg 24

<212> 234

<211> 71

<213> DNA

<215> Artificial Sequence

<216>

<218> Synthetic oligonucleotide probe

<2000> 134

gacggcttga cagcgagaag gacggcttga tctgtgagaa aaggcacaac 50

<212> 135

<211> 1-47

<213> DNA

<215> Homo sapiens

<400> 235

ggcaggggaa gaggggtgato cgaacccgggg aagggtogctg ggcaggggga 50
gttgggaaag cggcagcccc cggcggcccc gcagccccctt ctctctcttc 100
ctccccagtc ctatctgctt ctctgtggag gccagggcgt gcagcatcga 150
agacaggagg aactggagcc tcattggcgg gcccgggggg cgggcctcgg 200
gcttaaatag gagctccggg ctctggctgg gacccgaccc ctggcggcgg 250
cgctcccgct gctcctggcg ggtgatggaa aaccccagcc cggccggccc 300
cctgggcaag gccctctggg ctctctctctt ggcactctt ggcggcggcg 350
gccagcctct tgggggagag tccatctgtt ccggcagagc cccggccaaa 400
tacagcatca ccttcacggg caagtggagc cagaaggcct tccccaaaga 450
gtacccccctg ttcggcccc cggcgacgtg gtcttcgctg ctggggggcg 500
cgcatagctc cgaactacag atgtggaggga agaaccagta cgtcagtaac 550
gggctggcgg actttcgga gggcgggag gctggggcg tgatgaaggga 600
gatcaggggg gggggggagg cgtgcagag cgtgcacag gtgttttcgg 650
cggccggcgt ccccagggg accgggcaga cgtcggggga gctggagggtg 700
caggcagggc actcgtcgtt ctgttttgt gtgcgcctcg tgcacagccc 750
cgaactggtt gtggcggtgg acagcctgga cctgtgcgac ggggaacgctt 800
ggcgggaaac ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850
agcggtctca cctctctctt ccccaactt gccacatcc ccgaaggacac 900
ggtgaccgag ataaagtcct cctctccca gacccggcc aactccttct 950
actaccccgj gctgaaggcc ctgcctccca tggccagggt gacactgctg 1000
cggctggcag agagccccag ggccttcctt cctcccgccc cagtcccgcc 1050
caggcgggac aatgagattg tagacagcgc ctcagttcca gaaaacggcg 1100
tggactgcga ggtctccctg tggctgtcct ggggactgtg cggaggccac 1150
tgtggggagg tgggaccaa gaggaggact cgtacgtcc gggtcacagcc 1200
cgccaaacac gggagcccc gccccgagct cgaagaagag gctgagtgcg 1250
tccctgataa ctgggtctaa gaccagagcc ccgcagcccc tggggcccc 1300
cggagccatg ggggtcggg ggtcctctgt caggctcatg ctgcaggcgg 1350
ccgagggcac agggggtttc ggcctgctcc tgacccgggt gaggccggcg 1400

agaccatctc tgcactgaag ggcctctctg tggccggcac gggcattggg 1450
 aaacagcctc ctcttttccc aaccttgctt cttaggggac ccctgtgtccc 1500
 gtatgtcttc agctctctcc tctgcagga taaagtcata cccaaggctc 1550
 cagctactct aaattaigtc tctttataag ttattgctgc tccaggagat 1600
 tgccttctat cgtccagggg cctggctccc aagtggttgc agataacctc 1650
 gacctgggtg cctagggtgt gctgagccca ctctcccgag ggccgcatcca 1700
 agggggggcc acttgaaaag tgaataaatg gggcggtttc ggaagcgtca 1750
 ggttttctat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800
 tgcctacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847

<218> 236
 <218> 331
 <218> PRT
 <218> Homo sapiens

<408> 236
 Met Glu Asn Pro Ser Pro Ala Ala Ala Leu Gly Lys Ala Leu Cys
 1 5 10 15
 Ala Leu Leu Leu Ala Thr Leu Gly Ala Ala Gly Gln Pro Leu Gly
 20 25 30
 Gly Glu Ser Ile Cys Ser Ala Arg Ala Pro Ala Lys Tyr Ser Ile
 35 40 45
 Thr Phe Thr Gly Lys Trp Ser Gln Thr Ala Phe Pro Lys Gln Tyr
 50 55 60
 Pro Leu Phe Arg Pro Pro Ala Gln Trp Ser Ser Leu Leu Gly Ala
 65 70 75
 Ala His Ser Ser Asp Tyr Ser Met Trp Arg Lys Asn Gln Tyr Val
 80 85 90
 Ser Asn Gly Leu Arg Asp Phe Ala Glu Arg Gly Glu Ala Trp Ala
 95 100 105
 Leu Met Lys Glu Ile Glu Ala Ala Gly Glu Ala Leu Gln Ser Val
 110 115 120
 His Glu Val Phe Ser Ala Pro Ala Val Pro Ser Gly Thr Gly Gln
 125 130 135
 Thr Ser Ala Glu Leu Glu Val Gln Arg Arg His Ser Leu Val Ser
 140 145 150
 Phe Val Val Arg Ile Val Pro Ser Pro Asp Trp Phe Val Gly Val
 155 160 165

Asp Ser Leu Asp Leu Cys Asp Gly Asp Arg Trp Arg Glu Gln Ala	170	175	180
Ala Leu Asp Leu Tyr Pro Tyr Asp Ala Gly Thr Asp Ser Gly Phe	185	190	195
Thr Phe Ser Ser Pro Asn Phe Ala Thr Ile Pro Gln Asp Thr Val	200	205	210
Thr Glu Ile Thr Ser Ser Ser Pro Ser His Pro Ala Asn Ser Phe	215	220	225
Tyr Tyr Pro Arg Leu Lys Ala Leu Pro Pro Ile Ala Arg Val Thr	230	235	240
Leu Leu Arg Leu Arg Gln Ser Pro Arg Ala Phe Ile Pro Pro Ala	245	250	255
Pro Val Leu Pro Ser Arg Asp Asn Glu Ile Val Asp Ser Ala Ser	260	265	270
Val Pro Glu Thr Pro Leu Asp Cys Glu Val Ser Leu Trp Ser Ser	275	280	285
Trp Gly Leu Cys Gly Gly His Cys Gly Arg Leu Gly Thr Lys Ser	290	295	300
Arg Thr Arg Tyr Val Arg Val Gln Pro Ala Asn Asn Gly Ser Pro	305	310	315
Cys Pro Glu Leu Glu Glu Glu Ala Glu Cys Val Pro Asp Asn Cys	320	325	330

Val

<216> 237
 <216> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <220> Synthetic oligonucleotide probe

<410> 237
 -caggactgac aggggaagag gg 22

<216> 238
 <216> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <220> Synthetic oligonucleotide probe

<400> 238
 -caggactgc tacgtcgg 18

<210> 239
<211> 14
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 239
cagacatttc tctctctttc tccc 24

<210> 240
<211> 15
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 240
ccagttaaca gggagcact cagac 25

<210> 241
<211> 15
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 241
ccagccagag gcagatag 18

<210> 242
<211> 23
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 242
cggtaacagt gtctggggg atg 23

<210> 243
<211> 42
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 243
cagcccttc tctctcttc tcccagtc tatctgctc tc 42

<210> 244

<211 - 1894
<212 - DNA
<213 - Homo sapiens

<400 - 244
gggggggtcc gtgagggggt cctttgggca ggggtagtgt ttggtgtccc 50
tgttttggtt gatattgaca aactgaagct ttctgcacc actggactta 100
aggaagagtg taactgtagg cggacagctt tagtggccgg ccggccgctc 150
tcaccccccg taaggagcag agtcccttct actgaccaag atgagcaaca 200
ctacatcca ggagctccc accaatggga aggttttatt gaaaactaca 250
gtggagata ttgacataga gttgggtcc aaagaagctc cttaaagcttg 300
cagaaatctt atcaactctt gtttggagc ttattatgac aataccatct 350
tccatagagt tgtgctgtgt tccatagtc aaaggcgaga tctactggc 400
acaggagagt gtggagagtc tatctatgga ggcacattca aagatgaatt 450
tcattcacgg ttgcttttta atcggagagg actgggttgc atggcaaatg 500
ctggtctctc cgataatggc agccagtttt tcttcacact gggccgagca 550
gatgaactta acaataagca taccatcttt ggaaaggcta caggggatac 600
agtatataac atgttgcgac tgtcagaagt agacattgat gatgacgaaa 650
gaccacataa tccacacaaa ataaaaagct gtgaggtttt gtttaatcct 700
tttgatgaca tcattccaag ggaaattaaa aggtgaaaa aagagaaaac 750
agaggaggaa gtaagaaat tgaaacccaa aggcacaaaa aattttagtt 800
tacttccatt tggagaggaa gctgagggaag aagaggagga agtaaatcga 850
gttagtcaga gcctgaaggg caaaagcaaa agtagtcatg actgctttaa 900
ggatgatcca catctcagtt ctgttcagct tctagaaagt gaaaaagggt 950
atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050
aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100
aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150
agacaattaa aacgggaact cttagcagca aaacaaaaaa aagtagaaaa 1200
tgcajcaaaa caagcagaaa aaagaagtga agaggaagaa gcccctccag 1250
atgggtgtgt tgccgaatac agaagagaaa agcaaaaagta tgaagctttg 1300

aggaagcaac agtcaaaagaa gggaacttcc cgggaagata agacccttgc 135
 actjctgaac cagttttaat ctaaactcac tcaagcaatt gctgaaacac 140
 ctgaaaatga cattcctgaa acagaagtag aagatgatga aggatggatg 145
 tcaatgttac ttcagtttga ggataaaagc agaaaagtga aagatgcaag 150
 catgcaagac tcagatacat ctgaaatcta tgatcctcgg aatccagtga 155
 ataaaagaag gaggggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 160
 agaagataaa atgagaataa cgataaccag aacttgctgg aaatgtgoot 165
 acaatggoot tgaacagcc attgttccca acagcatcac ttaggggtgt 170
 gaaaagaagt atttttgaac ctgttgcttg gttttgaaaa acaattatct 175
 tgttttgcaa attgtggaat gatgtaagca aatgcctttg gtaactgcta 180
 catgtgttcc ttcctagctg accctttata ttgctaaatc tgaataaaaa 185
 caacttctct tccacaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1894

Q210 : 245
 Q211 : 472
 Q212 : PRT
 Q213 : Homo sapiens

Q400 > 245
 Met Ser Asn Ile Tyr Ile Gln Glu Pro Pro Thr Asn Gly Lys Val
 1 5 10 15
 Leu Leu Lys Thr Thr Ala Gly Asp Ile Asp Ile Glu Leu Trp Ser
 20 25 30
 Lys Glu Ala Pro Lys Ala Cys Arg Asn Phe Ile Gln Leu Cys Leu
 35 40 45
 Glu Ala Tyr Tyr Asp Asn Thr Ile Phe His Arg Val Val Pro Gly
 50 55 60
 Phe Ile Val Gln Gly Gly Asp Pro Thr Gly Thr Gly Ser Gly Gly
 65 70 75
 Glu Ser Ile Tyr Gly Ala Pro Phe Lys Asp Glu Phe His Ser Arg
 80 85 90
 Leu Arg Phe Asn Arg Arg Gly Leu Val Ala Met Ala Asn Ala Gly
 95 100 105
 Ser His Asp Asn Gly Ser Gln Phe Phe Phe Thr Leu Gly Arg Ala
 110 115 120
 Asp Glu Leu Asn Asn Lys His Thr Ile Phe Gly Lys Val Thr Gly
 125 130 135

Asp Thr Val Tyr Asn Met Leu Arg Leu Ser Glu Val Asp Ile Asp	140	145	150
Asp Asp Glu Arg Pro His Asn Pro His Lys Ile Lys Ser Cys Glu	155	160	165
Val Leu Phe Asn Pro Phe Asp Asp Ile Ile Pro Arg Glu Ile Lys	170	175	180
Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val Lys Lys Leu Lys	185	190	195
Pro Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe Gly Glu Glu	200	205	210
Ala Glu Glu Glu Glu Glu Glu Val Asn Arg Val Ser Gln Ser Met	215	220	225
Lys Gly Lys Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp Pro	230	235	240
His Leu Ser Ser Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala	245	250	255
Pro Asp Leu Val Asp Asp Gly Glu Asp Glu Ser Ala Glu His Asp	260	265	270
Glu Tyr Ile Asp Gly Asp Glu Lys Asn Leu Met Arg Glu Arg Ile	275	280	285
Ala Lys Lys Leu Lys Lys Asp Thr Ser Ala Asn Val Lys Ser Ala	290	295	300
Gly Glu Gly Glu Val Glu Lys Lys Ser Val Ser Arg Ser Glu Glu	305	310	315
Leu Arg Lys Glu Ala Arg Gln Leu Lys Arg Glu Leu Leu Ala Ala	320	325	330
Lys Gln Lys Lys Val Glu Asn Ala Ala Lys Gln Ala Glu Lys Arg	335	340	345
Ser Glu Glu Glu Glu Ala Pro Pro Asp Gly Ala Val Ala Glu Tyr	350	355	360
Arg Arg Glu Lys Gln Lys Tyr Glu Ala Leu Arg Lys Gln Gln Ser	365	370	375
Lys Lys Gly Thr Ser Arg Glu Asp Gln Thr Leu Ala Leu Leu Asn	380	385	390
Gln Phe Lys Ser Lys Leu Thr Gln Ala Ile Ala Glu Thr Pro Glu	395	400	405
Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met	410	415	420

Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp
425 430 435

Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg
440 445 450

Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met
455 460 465

Arg Glu Lys Lys Gln Arg Arg
470

<217> 246
<218> 24
<219> DNA
<220> Artificial Sequence

<221>
<222> Synthetic oligonucleotide probe

<223> 245
ctaggagatc ctactggcac aggg 24

<224> 247
<225> 18
<226> DNA
<227> Artificial Sequence

<228>
<229> Synthetic oligonucleotide probe

<230> 247
ctagtttagtc agagcatg 18

<231> 248
<232> 18
<233> DNA
<234> Artificial Sequence

<235>
<236> Synthetic oligonucleotide probe

<237> 248
cagatgggicc tggtagccg 18

<238> 249
<239> 24
<240> DNA
<241> Artificial Sequence

<242>
<243> Synthetic oligonucleotide probe

<244> 249
caactggcac aggaactgag atgtggatc 29

<245> 250

<111> 24
<111> DNA
<111> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<400> 150
ctggctcagc agtgcaaggg tctg 24

<111> 151
<111> 15
<111> DNA
<111> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<400> 151
cctctccgat taaaacgc 18

<111> 152
<111> 45
<111> DNA
<111> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<400> 152
gacagactg gttgccatgg caaatgctgg ttctcatgat aatgg 45

<111> 153
<111> 1456
<111> DNA
<111> Homo sapiens

<400> 153
gggggggggtt ggggctggaa gttcccgcca ggtccgtgac gggcgagaga 50
gagcgggccc ggcccgccctc ggctttgagg cgagagaagt gtcccagacc 100
catttcgact tgcctgacggc gtccagccct ggccagacat gtccacaggg 150
ttctccttgc ggtccgggac tctggggctcc accacgtgg ccgcgggggg 200
gacagagaca gggggggttt tctccttcgg aacgggaacg tctagcaacc 250
cttcttgggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300
aactacatctg ctccctcaag tggttttgga accgggctct ttggatctaa 350
aactgcaact gggttcactc taggaggaac aaatacaggt gccttgacac 400
ccagagagcc tcaagtggtc accaaatatg gaacctgca aggaaaaacag 450
atgcctgttg ggaagacacc catccaagtc tttttaggag tccccttctc 500

cagacotcct ctagggtatcc tcagggtttgc acctccagaa cccccggagc 550
cctggaaagg aatcagagat gctaccacct acccgccctgg atggagtctc 600
gctctgtgcg caggctggag tgcagtgcca ccatctcggc tcaactgcaac 650
ctccgcctcc cgggttcaaag ccagctctcct gctcagcct ctgagtgctc 700
ggggetacag gtgcctgcag gagtccctggg gccagctggc ctcgatgtac 750
gtcagcaagc gggaacggtc caagtggctg cgcctcagcg aggaactgtc 800
gtacctgaac gtgtacggcg cggcgcgcgcg gcccggggat ccccaagctg 850
cagtgatggt ctgggtcccg ggaggcgccct tcatctggg cgtgcttct 900
tcgtacgagg gctctgaact ggccgcgcgc gagaaagtgg tgcgtggtgt 950
ctcgagcac aggtctggca tcttcggctt cctgagcacg gacgacagcc 1000
acggcgcggg gaactggggg ctgctggacc agatggcggc tctggctggt 1050
gtgcaggaga acatcgacg cctcggggga gacccaggaa atgtgacct 1100
gttcggccag tcggcggggg ccctgagcat ctcaggactg atgatgtcac 1150
ccctagccctc gggctctctc cctcggggca tttcccagag tggcaccgcg 1200
ttattcagac ttttcacac tagtaaccca ctgaaagtgg ccaagaaggt 1250
tgcccaactg gctggatgca accacaacag cacacagatc ctggtaaac 1300
gcttgagggc acctacaggg accaagggtg tgcgtgtgtc caacaagatg 1350
agattcctcc aactgaactc ccagagagac ccggaagaga ctatctggtc 1400
catgagccct gtgggtggatg gtgtgggtgat ccagatgac cctttggtgc 1450
tccgtaacca ggggaaggct tcatctgtgc cctaccttct aggtgtcaac 1500
aaactggaat tcaattggct cttgccttat aatatacca aggagcaggt 1550
accacttggt gtggaggagt acctggacaa tgtcaatgag catgactgga 1600
agatgctacg aaacggtatg atggacatag ttcaagatgc cacttcgtg 1650
tatgcacac tgcagactgc tcactaccac cgagaaaccc caatgatggg 1700
aatctgcctt gctggccag ctacaacaag gatgaaaagt acctgcagct 1750
ggattttacc acaagagtgg gcctgaagct caaggagaag aagatggctt 1800
tttgatgag tctgtaccag tctcaaagac ctgagaagca gaggcattc 1850
taaggggtgg tatgcaggaa ggagccaaag aggggtttgc cccaccatc 1900

caggcactgg ggagactago catggacata cctggggaca agagttctac 1950
 caacccaggt ttagaactgc aggagctccc tgcctgctcc aggcocaaagc 2000
 tagagctttt ggcctgtgtg tgggaactgc actgaccttt ccagcctgac 2050
 atcccatgat gcccctctac ttcactgttg acatccagtt aggcacagggc 2100
 ctgtcaaacac caactgtgc tcaactctcc agcctcagga caacctcttt 2150
 ttttcctctc ttcacatctt cccacccctc aatgtctctt tgtgactctt 2200
 tottatggga ggtcgaccca gactgcactt gcccctgtca ctgcacccag 2250
 ctctgcattt accatccatc ctgtcaaac ttgttctgt ctgttcacat 2300
 tggcctggag gactagggca ggttgtgaca tggagcaaac tcttggtagt 2350
 tgggatctt ctctccacc caacttata tcccacaggg caactccaaa 2400
 ctctatacac aggggtggtc tcttcaataa agaagtgttg attagaaaaa 2450
 aaaaaa 2456

<110> 254
 <111> 545
 <112> PRT
 <113> Homo sapiens

<400> 254
 Met Ser Thr Gly Phe Ser Phe Gly Ser Gly Thr Leu Gly Ser Thr
 1 5 10 15
 Thr Val Ala Ala Gly Gly Thr Ser Thr Gly Gly Val Phe Ser Phe
 20 25 30
 Gly Thr Gly Thr Ser Ser Asn Pro Ser Val Gly Leu Asn Phe Gly
 35 40 45
 Asn Leu Gly Ser Thr Ser Thr Pro Ala Thr Thr Ser Ala Pro Ser
 50 55 60
 Ser Gly Phe Gly Thr Gly Leu Phe Gly Ser Lys Pro Ala Thr Gly
 65 70 75
 Phe Thr Leu Gly Gly Thr Asn Thr Gly Ala Leu His Thr Lys Arg
 80 85 90
 Pro Gln Val Val Thr Lys Tyr Gly Thr Leu Gln Gly Lys Gln Met
 95 100 105
 His Val Gly Lys Thr Pro Ile Gln Val Phe Leu Gly Val Pro Phe
 110 115 120
 Ser Arg Pro Pro Leu Gly Ile Leu Arg Phe Ala Pro Pro Glu Pro
 125 130 135

Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro	Pro	140	145	150
Gly	Trp	Ser	Leu	Ala	Leu	Ser	Pro	Gly	Trp	Ser	Ala	Val	Ala	Arg	155	160	165
Ser	Arg	Leu	Thr	Ala	Thr	Ser	Ala	Ser	Arg	Val	Gln	Ala	Ser	Leu	170	175	180
Leu	Pro	Gln	Pro	Leu	Ser	Val	Trp	Gly	Tyr	Arg	Cys	Leu	Gln	Gln	185	190	195
Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val	Ser	Thr	Arg	Glu	Arg	200	205	210
Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Val	215	220	225
Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu	Pro	Val	Met	230	235	240
Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala	Ser	Ser	245	250	255
Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Gln	Lys	Val	Val	Leu	Val	260	265	270
Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	275	280	285
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	290	295	300
Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	305	310	315
Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	320	325	330
Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	335	340	345
Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	350	355	360
Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	365	370	375
Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	380	385	390
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	395	400	405
Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	410	415	420

Ser Met Ser Pro Val Val Asp Gly Val Val Ile Pro Asp Asp Pro
425 430 435

Leu Val Leu Leu Thr Gln Gly Lys Val Ser Ser Val Pro Tyr Leu
440 445 450

Leu Gly Val Asn Asn Leu Glu Phe Asn Trp Leu Leu Pro Tyr Asn
455 460 465

Ile Thr Lys Glu Gln Val Pro Leu Val Val Glu Glu Tyr Leu Asp
470 475 480

Asn Val Asn Glu His Asp Trp Lys Met Leu Arg Asn Arg Met Met
485 490 495

Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln Thr
500 505 510

Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys Pro Ala
515 520 525

Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile Leu
530 535 540

Pro Gln Glu Trp Ala
545

<210> 215

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 255

aggagoutgc aggaatcttg ggg 23

<210> 256

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 256

ccacatcagg aagccgaaga tgcc 24

<210> 257

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 257

gaaggtatca agtgggtgag ctccagcag gactgtctgt acctg 45

<210> 159

<211> 2764

<212> DNA

<213> Homo sapiens

<400> 158

gagaaagggc ctgtctcagg caggccctgc gctcctatg cggagatgct 50

actgcacctg ctgtctgctt cgtctgtggg cgggtcccag gctatgggatg 100

ggaattctg gatacagctg caggagtcag tgatggtgac ggagggcctg 150

tgatctctg tgccctgctc ttctcctac ccccgacaag actgggacagg 200

gtctacccca gcttatggct actgggtcaa agcagtgaat gagacaacca 250

aggctgctcc tctggccaca aaccaccaga gtccagaggt ggaaatgagc 300

accgggggac gattccagct cactggggat ccggccaagg ggaaatgctc 350

cttggcgatc agagacgggc agatgcaggc tgagtcacag tactctcttc 400

gggtggagag aggaagctat gtgacatata attccatgaa cgtatgggttc 450

ttctctaaaag taacagtgtt cagcttcacg cccagacccc aggaaccapaa 500

caccagacccc acctgacctg tggacttctc cagaaagggt gtgagcgac 550

agaggacagt ccgaactcgt gtggcctatg cccccagaga ccttgttacc 600

agcatttcac gtgacaacac gccagccctg gagccccagc cccagggaaa 650

tgtcccatac ctgggaagccc aaaaaggcca gtccctgggg ctctctctgtg 700

ctgtctacag ccagcccccct gccacactga gctgggtcct gcagaacaga 750

gtccctctct cgtcccatcc ctggggccct agacccctgg cgtctggagct 800

gcccggggtg aaggctgggg attcagggcg ctacacccgc ccagcggaga 850

acaggcttgg ctcccagcag ccagccctgg acctctctgt gcagtatct 900

ccagagaaac tgagagtgat ggtttcccaa gcaaacagga cagtccctga 950

aaaccttggg aacggcacgt ctctcccagt actggagggg caaagccctgt 1000

gctgtctctg tctcacacac agcagccccc cagccaggct gagctggacc 1050

ccagaggggac aggtctctgag cccctcccag cctccagacc ccggggctct 1100

ggagctgctt cgggttcaag tggagcacga aggagagttc acctgccaag 1150

ctcggcaccc actgggctcc cagcacgtct ctctcagct ctccgtgcac 1200

tataagaagg gactcatctc aacggcattc tccaacggag cgtttctggg 1250
aatcggcacc aaggctcttc tttcctctg cctggccttg atcatcatga 1300
agattctacc gaagagaagg actcagacag aaaccccgag gccaggttc 1350
tcccggcaca gcacgatcct ggattacacc aatgtggctc cgaaggctgg 1400
ccccctggct cagaagcgga atcagaaagc cacaccaaac agtcctcggg 1450
ccccctcctc accaggtgct cccctcccag aatcacaaga gaaccagaaa 1500
aagcagtcac agttgcaccg tttcccagaa cccaaatcat ccactcaagg 1550
cccagaatcc caggagagcc aagaggagct ccattatgcc acgctcaact 1600
tcccaggcgt cagaccaggc cctgaggccc ggatgcccac gggcacccag 1650
ggggacttat cagaagtcaa gtcccaatga gggctctctt ggctcttagg 1700
ctgggaactc ggctaggggg gaaggttagg taagaggttg aagataacag 1750
agtgcacaag tctctctctc cctctctctc ctctctctct ctctctctct 1800
ctctctctct ctctctctaa aaaacatctg gccagggcac agtggctcac 1850
gcttgtaacc ccagcacttc gggaggttga ggtgggcaga cggctgagg 1900
tcgggagttc gagaccagcc tggccaaact ggtgaaaacc cgtctctact 1950
aaaaatacaa aaattagctg ggcctgggtg caggcgcttg taatcctacc 2000
tactcgggaa gctgaggcag gagaatcact tgaacctggg agacggagggt 2050
tcgagtgagc caagatcaca ccattgcacg ccagcctggg caacaaaagg 2100
agactccacc tcaaaaaaaaa aatcctccaa atgggttggg tgtctgtaat 2150
cccagcaact tgggaggcta aggtgggttg attgcttgag cccaggagtt 2200
cgagaccagc ctgggcacac tggtyaaacc ccctctctac aaaaaataca 2250
aaacatagct gggcttgggt gtgtgtgctt gtagtccag ctgtcagaca 2300
tttaaacccg agcaactcca cctgggaatg gagctgaata aaatgaggct 2350
gagacctaact gggctgcatt ccagacaggt ggaggcattc taagtccag 2400
gatgagacag gaggtccgta caagatacag gtacataaaga ctttgctgat 2450
aaaacagatt gcagtaaaga agccaaacca atccaccaa aaccaagttg 2500
gccacgagag tgaacctctg tegtctcac tgtacactc ctgacagcac 2550
catgacagtc taaaaatgcc atggcaacat caggaggtta ccgatatgt 2600
cccaaaaggg ggaggaatga ataatccacc ccttgtttag caaataagca 2650

agaaataaac ataaaagtgg gcaaccagca gctctaggcg ctgctcttgt 2760

ctatggagta gccattcttt tgttccttta cttctottaat aaacttgctt 2760

tcaccttaaa aaaa 2764

03100 259

03110 544

03120 PRT

03130 Homo sapiens

04000 259

Met Leu Leu Pro Leu Leu Leu Ser Ser Leu Leu Gly Gly Ser Gln
1 5 10 15

Ala Met Asp Gly Arg Phe Trp Ile Arg Val Gln Glu Ser Val Met
20 25 30

Val Pro Glu Gly Leu Cys Ile Ser Val Pro Cys Ser Phe Ser Tyr
35 40 45

Pro Arg Gln Asp Trp Thr Gly Ser Thr Pro Ala Tyr Gly Tyr Trp
50 55 60

Phe Lys Ala Val Thr Glu Thr Thr Lys Gly Ala Pro Val Ala Thr
65 70 75

Asn His Gln Ser Arg Glu Val Glu Met Ser Thr Arg Gly Arg Phe
80 85 90

Gln Leu Thr Gly Asp Pro Ala Lys Gly Asn Cys Ser Leu Val Ile
95 100 105

Arg Asp Ala Gln Met Gln Asp Glu Ser Gln Tyr Phe Phe Arg Val
110 115 120

Glu Arg Gly Ser Tyr Val Thr Tyr Asn Phe Met Asn Asp Gly Phe
125 130 135

Phe Leu Lys Val Thr Val Leu Ser Phe Thr Pro Arg Pro Gln Asp
140 145 150

His Asn Thr Asp Leu Thr Cys His Val Asp Phe Ser Arg Lys Gly
155 160 165

Val Ser Ala Gln Arg Thr Val Arg Leu Arg Val Ala Tyr Ala Pro
170 175 180

Arg Asp Leu Val Ile Ser Ile Ser Arg Asp Asn Thr Pro Ala Leu
185 190 195

Glu Pro Gln Pro Gln Gly Asn Val Pro Tyr Leu Glu Ala Gln Lys
200 205 210

Gly Gln Phe Leu Arg Leu Leu Cys Ala Ala Asp Ser Gln Pro Pro
215 220 225

Ala Thr Leu Ser Trp Val Leu Gln Asn Arg Val Leu Ser Ser Ser	235	236	240
His Pro Trp Gly Pro Arg Pro Leu Gly Leu Glu Leu Pro Gly Val	245	250	255
Lys Ala Gly Asp Ser Gly Arg Tyr Thr Cys Arg Ala Glu Asn Arg	260	265	270
Leu Gly Ser Gln Gln Arg Ala Leu Asp Leu Ser Val Gln Tyr Pro	275	280	285
Pro Glu Asn Leu Arg Val Met Val Ser Gln Ala Asn Arg Thr Val	290	295	300
Leu Glu Asn Leu Gly Asn Gly Thr Ser Leu Pro Val Leu Glu Gly	305	310	315
Gln Ser Leu Cys Leu Val Cys Val Thr His Ser Ser Pro Pro Ala	320	325	330
Arg Leu Ser Trp Thr Gln Arg Gly Gln Val Leu Ser Pro Ser Gln	335	340	345
Pro Ser Asp Pro Gly Val Leu Glu Leu Pro Arg Val Gln Val Glu	350	355	360
His Glu Gly Glu Phe Thr Cys His Ala Arg His Pro Leu Gly Ser	365	370	375
Gln His Val Ser Leu Ser Leu Ser Val His Tyr Lys Lys Gly Leu	380	385	390
Ile Ser Thr Ala Phe Ser Asn Gly Ala Phe Leu Gly Ile Gly Ile	395	400	405
Thr Ala Leu Leu Phe Leu Cys Leu Ala Leu Ile Ile Met Lys Ile	410	415	420
Leu Pro Lys Arg Arg Thr Gln Thr Glu Thr Pro Arg Pro Arg Phe	425	430	435
Ser Arg His Ser Thr Ile Leu Asp Tyr Ile Asn Val Val Pro Thr	440	445	450
Ala Gly Pro Leu Ala Gln Lys Arg Asn Gln Lys Ala Thr Pro Asn	455	460	465
Ser Pro Arg Thr Pro Pro Pro Pro Gly Ala Pro Ser Pro Glu Ser	470	475	480
Lys Lys Asn Gln Lys Lys Gln Tyr Gln Leu Pro Ser Phe Pro Glu	485	490	495
Pro Lys Ser Ser Thr Gln Ala Pro Glu Ser Gln Glu Ser Gln Glu	500	505	510

Glu Leu His Tyr Ala Thr Leu Asn Phe Pro Gly Val Arg Pro Arg
515 520 525

Pro Glu Ala Arg Met Pro Lys Gly Thr Gln Ala Asp Tyr Ala Glu
530 535 540

Val Lys Phe Gln

<311> 160
<311> 12
<311> DNA
<313> Artificial Sequence

<313>
<313> Synthetic oligonucleotide probe

<410> 160
caaaagctgc gctggtctg tg 22

<311> 161
<311> 34
<311> DNA
<313> Artificial Sequence

<313>
<313> Synthetic oligonucleotide probe

<400> 161
ttctgagcc cagagggtgc tgag 24

<311> 162
<311> 45
<311> DNA
<313> Artificial Sequence

<313>
<313> Synthetic oligonucleotide probe

<410> 162
cagagctgcca cccattcaaa tggagcacga aggagagttc acctg 45

<311> 163
<311> 157
<311> DNA
<313> Homo sapiens

<4000> 163
tgaagagtaa tagttggaat caaaagagtc aacgcaatga actgttattt 50
actgctgggt tttatgttg gaattcctct cctatggcct tgtcttggag 100
caacagaaaa ctctcaaaaca aagaaagtca agcagccagt gcgatctcat 150
ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200

aatgaataag actagtcato acatcggcca gctaagatct gatttagaca 250
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaaat 300
acttttatca ttgatgaaag aacaggtgac atatatgcca tacagaagct 350
tgatagagag gagcgatccc totacatctt aagagcccag gtaatagaca 400
tcgctactgg aagggctgtg gaacctgagt ctgagtttgt catcaaatgt 450
tcggatatca atgacaatga accaaaatto ctgagatgaac cttatgagga 500
cattgtacca gagatgtctc cagaaggaac attagttatc caggtgacag 550
caagtgatgc tgcgcatccc tcaagtggta ataatgctcg tctctctac 600
agcttacttc aaggcca-gcc atatttttct gttgaaccaa caacaggagt 650
cataagaata tcttttaaaa tggatagaga actgcaagat gagtattggg 700
taactattca agccaaggac atgattggtc agccaggagc gttgtctgga 750
acaacaagtg tattaattaa actttcagat gttaatgaca ataagcctat 800
atttaaagaa agcttatacc gcttgactgt ctctgaatct gcacccactg 850
ggactcttat aggaacaatc atggcatatg ataatgacat aggagagaat 900
gcagaaatgg attacagcat tgaagaggat gattcgcaaa cattgacat 950
tattactaat catgaaaactc aagaaggaat agttatatta aaaaagaaag 1000
tggattttga gcaccagaac cactaactga tttagagcaaa agttaaaaac 1050
catcatgttc ctgagcagct catgaagtao cacactgagg cttccaccac 1100
tttcattaag atccaggtgg aagatgttga tgagcctctt cttttctctc 1150
ttccatatta tgcatttgaa gtttttgaaag aaaccccaca gggatcattt 1200
gtaggcgtgg tgtctgccc acacccagac aataggaaat ctctatcag 1250
gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtaaaa 1300
tcactacaag taactcactg gatcgtgaaa tcagtgtttg gtacaacctc 1350
agtattacag ccacagaaaa atacaatatc gaacagatct cttcgatccc 1400
actgtatgtg caagtctcta acatcaatga tcatgtctct gagtctctct 1450
aatactatga gacttatgtt tgtgaaaatg caggctcttg tcaggtaatt 1500
cagaatatca gtgcagtggc tagagatgaa tccatagaag agcaccattt 1550
ttactttaat ctatctgtag aagacactaa caattcaagt tttacaatca 1600
tagataatca agataacaca gctgtcattt tgactaatag aactggtttt 1650

aacottcaag aagaacctgt ottotacato tccatcttaa ttgocgacaa 1700
 tggaaatcccg tcaattacaa gtacaaaacac cattaccato catgtctgtg 1750
 actgtggtga cagtggggagc acacagacct gccagtaaca ggagcttctg 1800
 ctttcacatgg gattcaagac agaagttatc attgctatcc ccatttgcac 1850
 tatgatcata ttggggctta tttttctgac ttggggctta aaacaaogga 1900
 gaaaacagat tctatttccg gagaaaagtg aagatttcag agagaatata 1950
 ttccaatctg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000
 tatagcagag ctgaggagta gtacataat gggggaacgc aagactcgga 2050
 aaaccacaag cgtcgagatc aggagcctat acaggcagtc tttgcaagtc 2100
 gggcccgaca gtgcacatatt caggaaattc attctggaaa agctogaaga 2150
 agctaatact gatcctgtgtg cccctccttt tgattccctc cagacctaag 2200
 cctttgaggg aacagggtca ttagctggat cctcgagctc cttagaatca 2250
 gcagtcctctg accaggatga aagctatgat taccttaatg agttgggacc 2300
 tcgctttaaa agattagcat gcctgttttg ttctgcagtg cagtcaataa 2350
 attagggtct tttaccatca aaatttttaa aagtgcataa gtgtattcga 2400
 aaccaatggc agtcctaaaag agcttctgtc cctggctcta tgggggggaa 2450
 agcctagtc catggagttt ctgatttcc ctggagtaaa taotccatgg 2500
 ttattttaag ctacctacat gctgtcattg aacagagatg tggggagaaa 2550
 tgtaaaacat cagctcacag gcctcaatac aaccagattt gaagtaaaat 2600
 aatgtaggaa gatattaaaa gtagatgaga ggacacaaga tgtagtogat 2650
 ccttatcgga ttatctcatt atttacttag gaaagagtaa aaataccaaa 2700
 cgaqaaatt taaaggagca aaaatttgca agtcaaatag aaatgtacaa 2750
 atcgagataa catctacatt tctatcatat tgacatgaaa attgaaaatg 2800
 tatagtcaga gaaattttca tgaattatto catgaagtat tgtttccttt 2850
 atttaas 2857

<210> 264
 <211> 772
 <212> PRT
 <213> Homo sapiens
 <400> 264

Met	Asn	Cys	Tyr	Leu	Leu	Leu	Arg	Phe	Met	Leu	Gly	Ile	Pro	Leu	
1				5					10					15	
Leu	Trp	Pro	Cys	Leu	Gly	Ala	Thr	Glu	Asn	Ser	Gln	Thr	Lys	Lys	
				20					25					30	
Val	Lys	Gln	Pro	Val	Arg	Ser	His	Leu	Arg	Val	Lys	Arg	Gly	Trp	
				35					40					45	
Val	Trp	Asn	Gln	Phe	Phe	Val	Pro	Glu	Glu	Met	Asn	Thr	Thr	Ser	
				50					55					60	
His	His	Ile	Gly	Gln	Leu	Arg	Ser	Asp	Leu	Asp	Asn	Gly	Asn	Asn	
				65					70					75	
Ser	Phe	Gln	Tyr	Lys	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Ser	Thr	Phe	
				80					85					90	
Ile	Ile	Asp	Glu	Arg	Thr	Gly	Asp	Ile	Tyr	Ala	Ile	Gln	Lys	Leu	
				95					100					105	
Asp	Arg	Glu	Glu	Arg	Ser	Leu	Tyr	Ile	Leu	Arg	Ala	Gln	Val	Ile	
				110					115					120	
Asp	Ile	Ala	Thr	Gly	Arg	Ala	Val	Glu	Pro	Glu	Ser	Gln	Phe	Val	
				125					130					135	
Ile	Lys	Val	Ser	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Lys	Phe	Leu	Asp	
				140					145					150	
Glu	Pro	Tyr	Gln	Ala	Ile	Val	Pro	Glu	Met	Ser	Pro	Gln	Gly	Thr	
				155					160					165	
Leu	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Ser	Ser	
				170					175					180	
Gly	Asn	Asn	Ala	Arg	Leu	Leu	Tyr	Ser	Leu	Leu	Gln	Gly	Gln	Pro	
				185					190					195	
Tyr	Phe	Ser	Val	Gln	Pro	Thr	Thr	Gly	Val	Ile	Arg	Ile	Ser	Ser	
				200					205					210	
Lys	Met	Asp	Arg	Gln	Leu	Gln	Asp	Glu	Tyr	Trp	Val	Ile	Ile	Gln	
				215					220					225	
Ala	Lys	Asp	Met	Ile	Gly	Gln	Pro	Gly	Ala	Leu	Ser	Gly	Thr	Thr	
				230					235					240	
Ser	Val	Leu	Ile	Lys	Leu	Ser	Asp	Val	Asn	Asp	Asn	Lys	Pro	Ile	
				245					250					255	
Phe	Lys	Glu	Ser	Leu	Tyr	Arg	Leu	Thr	Val	Ser	Gln	Ser	Ala	Pro	
				260					265					270	
Thr	Gly	Thr	Ser	Ile	Gly	Thr	Ile	Met	Ala	Tyr	Asp	Asn	Asp	Ile	
				275					280					285	

Gly	Glu	Asn	Ala	Glu	Met	Asp	Tyr	Ser	Ile	Glu	Glu	Asp	Asp	Ser	
				290					295					300	
Gln	Thr	Phe	Asp	Ile	Ile	Thr	Asn	His	Glu	Thr	Gln	Glu	Gly	Ile	
				305					310					315	
Val	Ile	Leu	Lys	Lys	Lys	Val	Asp	Phe	Glu	His	Gln	Asn	His	Iyr	
				320					325					330	
Gly	Ile	Arg	Ala	Lys	Val	Lys	Asn	His	His	Val	Pro	Glu	Gln	Leu	
				335					340					345	
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln	
				350					355					360	
Val	Glu	Asp	Val	Asp	Glu	Pro	Pro	Leu	Phe	Leu	Leu	Pro	Tyr	Tyr	
				365					370					375	
Val	Phe	Glu	Val	Phe	Glu	Glu	Thr	Pro	Gln	Gly	Ser	Phe	Val	Gly	
				375					385					390	
Val	Val	Ser	Ala	Thr	Asp	Pro	Asp	Asn	Arg	Lys	Ser	Pro	Ile	Arg	
				395					400					405	
Tyr	Ser	Ile	Thr	Arg	Ser	Lys	Val	Phe	Asn	Ile	Asn	Asp	Asn	Gly	
				410					415					420	
Thr	Ile	Thr	Thr	Ser	Asn	Ser	Leu	Asp	Arg	Glu	Ile	Ser	Ala	Tyr	
				425					430					435	
Tyr	Asn	Leu	Ser	Ile	Thr	Ala	Thr	Glu	Lys	Tyr	Asn	Ile	Glu	Gln	
				440					445					450	
Ile	Ser	Ser	Ile	Pro	Leu	Tyr	Val	Gln	Val	Leu	Asn	Ile	Asn	Asp	
				455					460					465	
His	Ala	Pro	Glu	Phe	Ser	Gln	Tyr	Tyr	Glu	Thr	Tyr	Val	Cys	Glu	
				470					475					480	
Asn	Ala	Gly	Ser	Gly	Gln	Val	Ile	Gln	Thr	Ile	Ser	Ala	Val	Asp	
				485					490					495	
Arg	Asp	Glu	Ser	Ile	Glu	Glu	His	His	Phe	Tyr	Phe	Asn	Leu	Ser	
				500					505					510	
Val	Glu	Asp	Thr	Asn	Asn	Ser	Ser	Phe	Thr	Ile	Ile	Asp	Asn	Gln	
				515					520					525	
Asp	Asn	Thr	Ala	Val	Ile	Leu	Thr	Asn	Arg	Thr	Gly	Phe	Asn	Leu	
				530					535					540	
Gln	Glu	Glu	Pro	Val	Phe	Tyr	Ile	Ser	Ile	Leu	Ile	Ala	Asp	Asn	
				545					550					555	
Gly	Ile	Pro	Ser	Leu	Thr	Ser	Thr	Asn	Thr	Leu	Thr	Ile	His	Val	
				560					565					570	

Cys	Asp	Cys	Gly	Asp	Ser	Gly	Ser	Thr	Gln	Thr	Cys	Gln	Tyr	Gln	
				575					581					585	
Glu	Leu	Val	Leu	Ser	Met	Gly	Phe	Lys	Thr	Glu	Val	Ile	Ile	Ala	
				590					596					600	
Ile	Leu	Ile	Cys	Ile	Met	Ile	Ile	Phe	Gly	Phe	Ile	Phe	Leu	Thr	
				605					611					615	
Leu	Gly	Leu	Lys	Gln	Arg	Arg	Lys	Gln	Ile	Leu	Phe	Pro	Glu	Lys	
				620					625					630	
Ser	Glu	Asp	Phe	Arg	Glu	Asn	Ile	Phe	Gln	Tyr	Asp	Asp	Glu	Gly	
				635					641					645	
Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	Phe	Asp	Ile	Ala	Glu	Leu	Arg	
				650					655					660	
Ser	Ser	Thr	Ile	Met	Arg	Glu	Arg	Lys	Thr	Arg	Lys	Thr	Thr	Ser	
				665					670					675	
Ala	Glu	Ile	Arg	Ser	Leu	Tyr	Arg	Gln	Ser	Leu	Gln	Val	Gly	Pro	
				680					685					690	
Asp	Ser	Ala	Ile	Phe	Arg	Lys	Phe	Ile	Leu	Glu	Lys	Leu	Glu	Glu	
				695					701					705	
Ala	Asn	Thr	Asp	Pro	Cys	Ala	Pro	Pro	Phe	Asp	Ser	Leu	Gln	Thr	
				710					715					720	
Tyr	Ala	Phe	Glu	Gly	Thr	Gly	Ser	Leu	Ala	Gly	Ser	Leu	Ser	Ser	
				725					730					735	
Leu	Glu	Ser	Ala	Val	Ser	Asp	Gln	Asp	Glu	Ser	Tyr	Asp	Tyr	Leu	
				740					745					750	
Asn	Glu	Leu	Gly	Pro	Arg	Phe	Lys	Arg	Leu	Ala	Cys	Met	Phe	Gly	
				755					760					765	
Ser	Ala	Val	Gln	Ser	Asn	Asn									
				770											

<110> 165
 <110> 149
 <110> DHA
 <110> Homo sapiens

<120>
 <120> unsure
 <120> 24, 60, 141, 226, 228, 249, 252
 <120> unknown base

<400> 265
 atttcaagga cagcca att tttntgtga accaacaaca ggagtcataa 50
 gaatattttt taaaatggat agagaactgc aagatgagta ttgggtaatc 100

atttaagaca aggatgatg ttgtcagaca ggagcgttgt ntggaacaac 150
 aagtgatata attaaacttt agatgttaa tgacaataag cctatatatta 200
 aagaaattt ataccgcttg actgtntgtg aatctgcacc cactgggant 250
 tntatargaa caatcatggo atatgataat gacataggag agaatgcaga 300
 aatggattac agcattgaag aggatgatto gcaaacattt gacattatt 349

<210> 266
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<401> 266
 ctgactgtc ttggaatctg cacc 25

<210> 267
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<406> 267
 aaatggaggga agcctccagt gtgg 24

<210> 268
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<409> 268
 ccactacggg attagagcaa aagttaaaaa ccacatcggt tcttgaggca 50

gpc 52

<210> 269
 <211> 2747
 <212> DNA
 <213> Homo sapiens

<400> 269
 gcaaacctcag cttctagtat ccagaactcca ggcgcgcgcc gggcgcggac 50
 cccaaaccccg acccagagct tctccagcgg cggcgcagcg agcagggctc 100
 cccgccttaa cttctccgc ggggcaccgc cacttcggg agtccgggtt 150

gcccacctgc aaactctccg ccttctgcac ctgcacccc tgagccagcg 230
 cgggcacccg agcgagtcac ggccaacggg gggctgcagc tgttgggttt 250
 cattctcgcc ttctgggat ggcctggcgc catcgccagc actgcctgc 300
 ccagtgagc gatttactcc tatgcggcg acaacatcgt gaccgcccag 350
 gccatgtacg aggggctgtg gatgtcctgc gtgtgcgaga gcacggggca 400
 gatccagtgc aaagtctttg actccttgcg gaatctgagc agcacattgc 450
 aagcaacccg tgccttgatg gtgggtggga tctcctggg agtgatagca 500
 atctttgggg ccacggctgg catgaagtgt atgaagtgc tgggaagcga 550
 tgaggctgag aagatgagga tggctgtcac tgggggtgg atattctctc 600
 ttgcaggtct ggctatttta gttgcacag catggtatgg caatagaatc 650
 gttcaagaat tctatgaccc tatgacccc gtcacgcca ggtacgaatt 700
 tggtcaggct ccttctactg gctgggtgc tgcctctctc tgcctctgg 750
 gaggtgcctt actctgcctt tctgtccccc gaaaaacaa cctttaccca 800
 acaccaaggg cctatccaaa acctgcacct tccagcggga aagactacgt 850
 gtgacacaga ggcaaaaagg gaaaatcatg ttgaaaacaa ccgaaaatgg 900
 acattgagat actatcatta acattaggac cttagaattt tgggtattgt 950
 aatctgaagt atggtattac aaaaacaaa aacaaacaaa aaacccatgt 1000
 gttaaaaata tcatgtctaa acatggctta atcttatttc atctctctcc 1050
 ctcaatatag gagggagat ttttcattt gtattactgc ttcctattga 1100
 gtaatcatac tcaaatgggg gaagggtgc tcttaataa tatatagata 1150
 tgtatatata catgtttttc tattaataat agacagttaa ataactattc 1200
 cattatgttg atactagcat acttaaaata tcttaaaat aggtaaaatgt 1250
 atttaattcc atattgatga agatgtttat tggatatatt ccttttttgt 1300
 ccttatatac atatgtaaca gtcacatata atttactctt cttcattago 1350
 tttgggtgoc ttggccacaa gacctagcct aatttaccaa ggatgaatto 1400
 tttcaattct tcatgctgc ccttttcata caattattt attttttacc 1450
 ataattttat agcacttgca tegtatttaa gccttattt gttttgtgtt 1500
 tcatgtgtct ctatctctgt aatctaacc atttcatago ctacatttta 1550
 gtttctaaag ccaagaagaa tttattacaa atcagaactt tggaggcaaa 1600

tttttctgca tgaccaaagt gataaattcc tgttgacctc cccacacaat 1650
 cccctgaactc tgacccatag cactcttjgt tgccttgaaa atatttgtcc 1700
 aattgagtag ctgcatgctg tccccccagg tgttgtaaca caactttatt 1750
 gattgaattt ttaagctact tttcatagt tttatatccc cctaaactac 1800
 tttttgttc cccattccctt aattgtattg tttccccag tctaattatc 1850
 atgggtttta tatcttccta ataaggtjtg gctgttttgt ctgaacaaaag 1900
 tgcctagaactc cctggagtgga taatctggtg acaaatattc tctctgtaga 1950
 tctaagcaag ccacttaact tttctacctc tttttctat ctgcccacatt 2000
 gagataatga cacttaacca gttagaaag gtagtgtgaa tattaattag 2050
 tttatattac tcttattctt tgaacatgaa ctatgcctat gtagtgtctt 2100
 tatttgcctc gctggctgag acactgaaga agtcactgaa caaaaactac 2150
 caagctactt ccctgtgatt cactgccttc ctctctctac cagtctattt 2200
 caactgaaca aaacctacac acataccttc atgttggtta gtgccttcct 2250
 ctctctacca gtctatttcc actgaacaaa acctaagcac atacttccat 2300
 gtggctcagt gccttctct ctctacagct ctatttccat tctttcagct 2350
 gtgtctgaca tgtttgtgtt ctgtccactt ttaacaaactg ctcttaactt 2400
 tccagctctgt acagaatgct atttccactg agcaagatga tctaattggaa 2450
 agggctgttg cactggtgtc tggagaactg gatttgagtc ttgggtgctat 2500
 caatcacagt ctgtgtttga gcaaggaatt tggctgctgt aagcttattg 2550
 ctccatctgt aagcgtgtgt ttgtaattcc cgaatttccc acctcacagt 2600
 gatgtgttgg ggatccagtg agatagaata catgtaagtg tggttttgta 2650
 atttaaaaaag tgcataacta agggaaaagaa ttgaggaatt aactgcatac 2700
 gtttcggtgt tgccttttcaa atgtttgaaa ataaaaaaaaa tgttaag 2747

<210> 270
 <211> 211
 <212> PRT
 <213> Homo sapiens

<210> 270
 Met Ala Asn Ala Gly Leu Gln Leu Leu Gly Phe Ile Leu Ala Phe
 1 5 10 15
 Leu Gly Trp Ile Gly Ala Ile Val Ser Thr Ala Leu Pro Gln Trp

	20	25	30
Arg Ile Tyr Ser Tyr Ala Gly Asp Asn Ile Val Thr Ala Gln Ala	35	40	45
Met Tyr Glu Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly	50	55	60
Gln Ile Gln Cys Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser	65	70	75
Thr Leu Gln Ala Thr Arg Ala Leu Met Val Val Gly Ile Leu Leu	80	85	90
Gly Val Ile Ala Ile Phe Val Ala Thr Val Gly Met Lys Cys Met	95	100	105
Lys Cys Leu Glu Asp Asp Glu Val Gln Lys Met Arg Met Ala Val	110	115	120
Ile Gly Gly Ala Ile Phe Leu Leu Ala Gly Leu Ala Ile Leu Val	125	130	135
Ala Thr Ala Trp Tyr Gly Asn Arg Ile Val Gln Glu Phe Tyr Asp	140	145	150
Pro Met Thr Pro Val Asn Ala Arg Tyr Gln Phe Gly Gln Ala Leu	155	160	165
Phe Thr Gly Trp Ala Ala Ala Ser Leu Cys Leu Leu Gly Gly Ala	170	175	180
Leu Leu Cys Cys Ser Cys Pro Arg Lys Thr Thr Ser Tyr Pro Thr	185	190	195
Pro Arg Pro Tyr Pro Lys Pro Ala Pro Ser Ser Gly Lys Asp Tyr	200	205	210

Val

41110 171
 41110 364
 41110 DNA
 41110 Homo sapiens

41200
 41210 unsure
 41220 1, 63, 163, 434, 436, 444
 41230 unknown base

44000 171
 ttctgaccac aaccggggct ncagctgttg ggcttcacat cgccttccctg 50
 ggatggatcg ggcacatcnc cacactgccc ttccccagtg gaggatttta 100
 ctccctatgc tggcgacaa atcgtgaccg ccacagccat gtacgagggg 150

ctgtggatgt ccngcgtgtc gcagagcacc gggcagatcc agtgcaaagt 200
 ctttgactcc ttgttgaato tgagcagcac attgcaagca acccgtgpcr 250
 ccatgggtgt ttggcaccctc ctggggagtga tagcaatctt tctgggcacc 300
 gttggcatga agtgtatgaa gtgcttggaa gacgatgagg tgcagaagat 350
 gaggatggtt gtcattgggg ggcgatatt tctcttgcg ggtctggcta 400
 ttttagttgc cacagcatgg tatggcaata gaancttca acantctat 450
 gacccatga cccagtcac tgcaggtac gaatttggc aggcctctct 500
 ccctggctgg gctgctgctt ctctctgctt tctgggaggt ggcctacttt 550
 gctgttcctg tccc 564

<210> 272
 <211> 498
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 30, 49, 102, 141, 147, 171, 324-325, 339-341
 <223> unknown base

<400> 270
 acccttgacc caacggggcc ccccgaccgn ttcattggca aacgggggnc 50
 tccagatggt gggcttcatt ctccccttcc tgggatggac cggcgcccat 100
 cttcagcaat gcccggccc agtggaggat ttactctat nccggcnaca 150
 acatctgac cggccaggcc ntgtacgagg ggtctggat gtcctggctg 200
 tgcagagca cggggcagat ccagtgcaca gtctttgact cccttgctga 250
 atctgagcag cacattgcac gcaaccctg ccttgatggt ggttggcacc 300
 ctcttgagc tgatagcaat cttnntggcc accgttgtnn ntgaagtgt 350
 tgaagtgtt ggaagacgat gaggtgcaga agatgaggat ggtctgcatt 400
 cggggggaga tattctctct tgcaggtctg gctattctag ttgcacagc 450
 atgctatgca aatagaatcg ttcaagaatt ctatgacct atgaccca 498

<410> 271
 <411> 552
 <412> DNA
 <413> Homo sapiens

<420>
 <421> unsure

4232- 25, 57, 67, 94-95, 116, 152, 165, 212, 233, 392-394
4233- unknown base

4410- 173

gggacagacc attatccaac cgggntccact gttgggtccat ctccctccctg 50
gatjaanccg gccatcttca gactccctgc cccatggaga ttttncctat 100
ctctggcaca acatcttgac ccccagccat gtacgagggg ctttgaacgt 150
cngcgtgtcg cagancaccg ggcagatcca gtgcacagtc tttgactcct 200
tcttgaattct gngcagcaca ttgcagcaac ccctggccctg atgggtgggtg 250
gcatccctcct gggagtgata gcaatctttg tggccacccg tggcatgaag 300
tgtatgaagt gotttggaaga ccatgaggtg cagaagatga ggatggctgt 350
cattgggggc gcatatttc ctcttgccag tctggctatc tnnngctggc 400
acaccatggt atggcaatag aatcgttcaa gaattctatg accctatgac 450
cccagtcacat gccaggtacg aatttggtca ggcctcttc actggctggg 500
ctgtgtcttc ctctgcctt cgggaggtg ccttactttg ctgtccctgc 550
ga 600

4416- 174

4411- 326

4412- DNA

4413- Homo sapiens

4421-

4421- unsure

4422- 13, 50, 60, 123, 127, 370, 395, 397-398, 402-403, 406-407

4423- unknown base

4430- 174

attctccctt cctggatgga tggcaccacc gtcacattgc cttcccccan 10
ttggggattn actcctatgc ttggcacaac atcgtgaccc cccagggcat 100
ctacccaggg gctttggatg tcttgctgtt cgcagagcac cgggcagatc 150
ccagtgcaaa gtctttgact ccttgctgaa tctgagcagc acattgcaag 200
caaaccgtgc cttgatgggg ttggcatcct cctgggagtg atagcaacct 250
ttgtgcccac cgttggcatg aagtgtatga agtgcttggc agacgatgag 300
gtgcacagaag atgaggatgg ctgtcattgg gggcgcgata tctcttgttg 350
caggtctggc tatttttagtn gccacagcat ggtatggcaa tagantnntt 400
cnnngnntct atgacctat gaccccagtc aatgccaggt acgaatttgg 450

tcaggtctctc ttacttggtt gggctgctgc ttctctctgc cttctgggag 500

atgactact ttgctgttcc tgcacc 526

<11> 275
<11> 298
<12> DNA
<13> Homo sapiens

<18>
<11> unsure
<12> 21, 61, 91, 144, 233-239, 262, 265-266, 271, 274
<13> unknown base

<19> 275
agatccagg cagatccag tncaaagtct ttgacccctg ctgaatctga 50
gacacatt ncaagcaacc ccttgccctg aaggtaggtg acatccccc 100
tggagtgaa tagcaatctt tctggccacc gttggcatga agtctatgaa 150
tggcttgaa gacgatgagg tgcagaagat gaggatggct gtcattgggg 200
ggagatatt tctctctgca ggtctggcta ttttagtnn cacagcatgg 250
tatggcata gnatntctg nggntctctat gacctatga cccagtcac 300
tgcaggtac gaatttggtc aggtctctct cactggctgg gctgctgctt 350
ctctctgctt cctgggaggt gacctacttc gctgttcttg tcccagaa 398

<20> 276
<11> 435
<12> DNA
<13> Homo sapiens

<21>
<11> unsure
<12> 19, 58, 130, 234, 314, 364, 427, 450, 461, 476
<13> unknown base

<22> 276
agcaatgccc tgcacccagt ggaggattaa ttctatgnt ggggacaaca 50
ttgtgaengc ccaggccatg taaggggggc tctggatgtc ctgctgtctg 100
cagagcaacc ggcagatcca gtgcacagtn ttgactctc tgcctgaattt 150
gagcagcaca ttgcaagcaa cccgtgcctt gatggtaggt ggcattcttc 200
tggagtgat agcaatcttt gtggccaccg tggnaatgaa gtgtatgaag 250
tctctgggaag acgatgaggt gcagaagatg aggatggctg tcattggggg 300
cgcctatattt cctnttgcag gtctggctat tttagttgac acagcatggt 350
atgccaatag aatngttcaa gaattttatg acctatgac cccagtcaat 400

gcagaggtacg aatttggta ggcttnttct actgggtggg ctgctgcttn 450

ttctgctct ntgggaggtg cctantttg ctgttcttgc gaacc 495

<110> 277

<111> 200

<112> RNA

<113> Homo sapiens

<120>

<121> unsure

<122> 34, 37, 133, 147, 163, 165-166, 172

<123> unknown base

<130> 277

tcctaggggg ggcgatatt tttcttgcg ggtntggta ttttagttgc 50

ccagcatgg tatggcaata gaatcttca agaattntat gacctatga 100

cttcagtcac tgcaggtac gaattgggtc aggtctntt cactggntgg 150

ctgtctgctt ctntnngct tntgggaggt gcctacttc gctgtcttg 200

<140> 276

<141> 342

<142> RNA

<143> Homo sapiens

<150>

<151> unsure

<152> 16, 43, 55, 77, 193, 361-362, 391-392, 396

<153> unknown base

<160> 276

ttcttgggat ggatcggcc ccatctcac atgccttgc cctggagat 50

ttactctat gctggcgaac aacatctga ccgccaggg catgtaagag 100

gggtcttggc atgtcttgc tgcctagag caccgggcag atccagtgc 150

tagtcttga ctcttctgt aatctgagca gcacattgca agcaaccttg 200

cttctgctgt ggttggcctc ctcttgggag tgatagcaat ctttctggcc 250

accttctgca tgaagtgtc tgaagtctt ggaagacgat gaggtgcaga 300

agatgaggat ggtctctatt gggggcgcga tctctctct tgcaggtctg 350

gctatcttag nngccacagc atggtatggc aatcagaccc nntcnaaac 400

ctctatgcac tatgacccca gtcaatgcca ggtaagaatt tggtcaggct 450

ctcttcaatg gctgggctgc tgcctctctc tgccttcttg gaggtgcctt 500

actttgtgt tctgtcccc gaaaaacaac ctcttaccac cg 542

<210> 279
<211> 548
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 39, 115, 147, 228, 327
<223> unknown base

<300> 279
gggggtgca gctgttgggc ttcattctgc ttctgggat ggaatcggcg 50
ccatcatcag cactgcccctg ccccatggag gatttactcn tatgctggcg 100
acacatctgt gacccccag gccatgtacg aggggctgtg gatgtcngcg 150
tgtctagag caccgggcag atccagtgc aagtctttga ctcttgcctg 200
aatctagca gcacattgca agcaacctg ccttgatggt ggttggcctc 250
ctcttggag tgatagcaat ctttgtggcc accgttggca tgaagtgtat 300
gcagtccttg gaagacgat aggtgcagaa gatgaggatg gctgtcattg 350
ggggcctgat atttctctct gcaggtctgg ctatttntag ttgcacacag 400
atgtctcggc aatagaatcg ttcaagaatt ctatgacct atgaccccag 450
tcaatgcag gtacgaattt ggtcaggctc tcttcaactg ctgggctgct 500
ctttctctct gcttctggg aggtgcctca cttgtctgtt cctgcgaa 548

<210> 210
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<300> 210
ccacccagtc atggccaaag c 21

<210> 251
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<300> 251
cttccacag tagtctttcc cgtcgg 26

<210> 212
<211> 43

<112> DNA
<113> Artificial Sequence

<121>
<121> Synthetic oligonucleotide probe

<401> 1-2
ctgcagctgt tgggttcac tctgccttc ctgggatgga tgg 43

<111> 283
<111> 2785
<112> DNA
<113> Homo sapiens

<401> 283
ggtggagtc agctggcgg gacggcggc ctggccttc ccttcggcc 50
ctggccttc agcgctaga cgcaccccc ccttcagcgc gccacccgg 100
tagaggacc ccgcctgtg ccgcacggg cccgccttt ttgtaaaaa 150
taaagcggg gcagcattaa cgttcctgc ccgggtgac tctcagggg 200
ctcccccca aaggctgtcc gcgcctaac aacatggcg aggtggagc 250
ggtctcagc ctgcagccc agcacagct caaattcgc ggtcccttc 300
ccgctgtgt caccaccaac cttaaagctg gcaacccgc agacggaaat 350
ctgtgtttta aggtgaagc tacagacca cgtaggtact gtgtgaggc 400
caatagcga atcatcgat caggggcctc aattaatga tctgtgatg 450
tacagcctt cgattatgat cccaatgag aaagtaaac caagtttat 500
cttcagttc tgtttgtcc aactgacac tcagatatg aagcagtat 550
gaaggatgc aaacccgaag accttatgga ttcaaaaact agatgtgtg 600
tcgaattgc agcagagaat gataaacac atgatgtag aataaataa 650
attatatca caactgcac aaagacaga acaccaatg tgtctaagt 700
ctcgagttc cctttggatg acacccaagt taagaaggc atggaagaat 750
gtaagcggc gcaaggcgaa gttcagagg taaggaggga gaacaaggc 800
ttcaaggaa agatggact ggggatgagg aagacagtgc agagcaacg 850
ccccattca gcattagccc caactggga ggaagaagg cttagcacc 900
ggctcttgc tctgttggt ttgtcttta cgttggtgt aattattgg 950
aagattgct tctagaggta gcctgcacg gatggtaaat tggattggt 1000
gatccaccat atcatggat ttcaatttat cataaccat tgtaaaaaa 1050

aattaatgta tgatgacata tcacagggtct tgccttttaa ttacccctcc 1140
ctgcacacac atacacagat acacacacac aaatataatg taacgatctt 1150
ttagaaagt ttaaaatgtat agtaactgat tgagggggaa aaagaatgat 1200
ctttattaat gacaaggga accatgagta atgcacacac ggcattattgt 1250
aaatgtcatt ttaaacattg gtaggccctg gtacatgatg ctggattacc 1300
ctcttaaaa tgacacccct cctcgccctgt cgggtgttgg ccttggggag 1350
ctggagccca gcatgttggg gagtgggttc agtccacac agtagtccc 1400
acgtggccca ctccggccc aggtgtcttt cctgtcttcc agttctgtcc 1450
aagccatcag ctccctggga ctgatgaaca ggtccagaag cccaaaggaa 1500
ttgcactgtg gcagatcag acgtactgt cacaagttag aggtgtgtgt 1550
tgactgattg accagcgtct ttggaaataa atggcagtgc ttgttcact 1600
taaggggacc aagctaaatt tctattggtt catgtagtga agtcaaatg 1650
ctattcagag atgttcaatg catatttaac ttatttaatg tatttcacct 1700
catgtttctt tattgtcaca agagtacagt taatgttggg tgtgttgaa 1750
ctctgttggg tgaactggta ttgtgttgg aggggttggg gtcctctgt 1800
ctctggagag ctctgtcatg ttgggtggg gtttattggg atgttggaga 1850
agagtggcca ggaagtgtt tttctgggtc agtaaaataa aactgtcata 1900
gggagggaaa ttctcagtag tgacagtcaa ctctaggtta cctctcttaa 1950
tgaagagttag tcagtctctt agattgttct cacaaccct ctcaaccatt 2000
actcacactt ccagcgccca ggtccaagtc tgagcctgac ctcccttgg 2050
ggactagcc ttgagtcagg acaaatggat cgggtgtcag agggttagaa 2100
ggaggggccc cagcagttgt ggttggggag caagggaaga gagaaactct 2150
tcacccaatc ctctcagtag tagttgagag ttgactgtg aattaatttt 2200
atgcacataa agaccaacc agttctgttt gactatgtag catcttgaaa 2250
agaaaatta taataaagcc ccaaaattaa gaaaa 2285

<210> 284
<211> 243
<212> PRT
<213> Homo sapiens

<400> 234
Met Ala Lys Val Glu Gln Val Leu Ser Leu Glu Pro Gln His Glu

1	5	10	15
Leu Lys Phe Arg Gly Pro Phe Thr Asp Val Val Thr Thr Asn Leu	20	35	31
Lys Leu Gly Asn Pro Thr Asp Arg Asn Val Cys Phe Lys Val Lys	35	40	45
Thr Thr Ala Pro Arg Arg Tyr Cys Val Arg Pro Asn Ser Gly Ile	50	55	61
Ile Asp Ala Gly Ala Ser Ile Asn Val Ser Val Met Leu Gln Pro	65	70	75
Phe Asp Tyr Asp Pro Asn Glu Lys Ser Lys His Lys Phe Met Val	80	85	91
Gln Ser Met Phe Ala Pro Thr Asp Thr Ser Asp Met Glu Ala Val	95	101	106
Trp Lys Glu Ala Lys Pro Glu Asp Leu Met Asp Ser Lys Leu Arg	110	115	120
Cys Val Phe Glu Leu Pro Ala Glu Asn Asp Lys Pro His Asp Val	125	131	136
Glu Ile Asn Lys Ile Ile Ser Thr Thr Ala Ser Lys Thr Glu Thr	140	145	150
Pro Ile Val Ser Lys Ser Leu Ser Ser Ser Leu Asp Asp Thr Glu	155	161	166
Val Lys Lys Val Met Glu Glu Cys Lys Arg Leu Gln Gly Glu Val	170	175	181
Gln Arg Leu Arg Glu Glu Asn Lys Gln Phe Lys Glu Glu Asp Gly	185	190	196
Leu Arg Met Arg Lys Thr Val Gln Ser Asn Ser Pro Ile Ser Ala	200	205	211
Leu Ala Pro Thr Gly Lys Glu Glu Gly Leu Ser Thr Arg Leu Leu	215	220	225
Ala Leu Val Val Leu Phe Phe Ile Val Gly Val Ile Ile Gly Lys	230	235	240
Ile Ala Leu			

00110-235
 00110-418
 00120-DNA
 00130-Homo sapiens

00200-
 00210-unsure

<222> 40, 53, 63, 119, 134, 177-178, 255
<223> unknown base

<400> 245
gttagtcttct tagattgtcc ttatcccacc ttccaacccn tactcacatt 50
tcctgggccc aggtccangt ctgagcctga cttccccttg gggacctaga 100
ctwajtcag gacaatggnt cgggctgcag aggnntagaa gcgaggggac 150
cagracctctt gggcggggag caagggngga gagaaactct ccagcgaatc 200
ctctagctac tagctgagag tttagactgtg aattaattct atgcacataaa 250
ajamcaccac agttctgtct gactatgtag catcttgaaa agaaaaatta 300
caataaagcc ccaaaaattaa gaattctctt gcacattttgt cacattctgt 350
ctatgggggg aattattatt ttatcattct tattattttg ccattgggaag 400
gttcacatta aaatgagc 418

<220> 246
<221> 243
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 73, 97
<223> unknown base

<400> 256
tattgtaaaag gccattttta accattggga ggccctggga catgatgctg 50
gattacctcc ttaaatgaca cctttctctg cctgttgggt ctggcccttg 100
cgatagctgga gccccagcat gctggggagt ggggtcagct ccacacagta 150
gttcccacgt ggcccactcc cggcccagga tgctttccgt gtcttcagtt 200
ctgtccaaagc catcagctcc ttgggaactga tgaacagagt cagaagccca 250
naggacttgc cactgtggga gcacagagc tactctcat aagttagagg 300
cgtgtgttga ctgattgacc cagcgctttg gaaataaatg gcagtgtctt 350
gttcacttaa agggacccaag ctaaaattga ttgggtccat tagtgaaagtc 400
aaatttttat ccagagatgt ttaatgcata tttaactcat ttaattatt 450
tcactccatg tttcttatt gtccacaagag tccagttaac gctgctgtgt 500
gttcacactct gttgggtgaa ctggtattgc tgctggaggg ctg 543

<210> 287
<211> 270

<212> DNA
<213> Homo sapiens

<221>
<221> unsure
<222> 31, 64, 72, 164, 198, 200, 220, 222, 229, 242
<223> unknown base

<400> 247
ctctgggggggt tttgttcctt aattcgcttg tgtaatttt gggaagattg 50
ctctgtgaggt tagnatgcac cnggcctggta aattggattg gtggatccac 100
catatcctatg ggatttaaat ttatcataac catgtgtaaa aagaaattaa 150
tctatctga catctccacg gtattgcctt taaattacc atccctgnan 200
anccatccac agatccacac anacaaatnt aatgtaacga ttttttagaa 250
attataaat gtatagtaac 270

<212> DNA
<213> Homo sapiens
<221>
<221> unsure
<222> 31, 116, 129, 197, 273, 294, 297, 349, 351
<223> unknown base

<400> 348
gttggccat cccgggccc ggcctctctt cggctttcag ttctgtccaa 50
gcatcagct ccttgggaat gatgaacaga gtcagaagcc caaaggaatt 100
ggaatgggc agcatnagac gtacttgtta taagtggag ggcgtgtgtg 150
actaatgac ccagcgcttc ggaaataaat ggcagtgctt tgttcantta 200
aagggtccaa gctaaatttg tattggctta tctagtgaag tcaaacctgt 250
attccagat gttaaatgca tatttaantt atttaattga tctnatntca 300
tgttttctta ttgtccaaag agtacagtta atgctggctg ctgctgaant 350
atgctggctg aactggtatt gctgctggag ggcgtgggc tccctgtct 400
ttccatgctt tggctatgtg gaggtggg 423

<212> DNA
<213> Homo sapiens
<221>
<221> unsure
<222> 31, 116, 129, 197, 273, 294, 297, 349, 351
<223> unknown base

<400> 259
tgctttcctt gtcttcagtt ctgtccaaag catcagctcc ttgggacttg 50

atgaacagag tcagaagccc aaaggaattg cactgtggca gcacagacg 100
taactogtcac aagttagaggg cgtgtgttga ctgattgacc cagcgctttg 150
gaaataaatg gcagtgcttt gttcacttaa agggaccaag ctaaaattgt 200
attgggttcac gtagtgaagt caaactgtta ttacagagatg tttaatgcac 250
acttaactta tttaatgtat ttcatctcac gttttcttat tgcacaaga 300
gtacagttaa tgcctgctgc 320

<210> 290
<211> 609
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 57, 60, 136, 235, 244, 304, 339, 355, 359, 361, 387, 432, 441,
447, 481, 513, 532, 534, 598
<223> unknown base

<400> 290
aaacatttaa aagttgaggg gaaaagaatg atcctttatt aatgacaagg 1
gaaacccctgn gtaatgcac aatggcatat tgtaaatgtc attctaaaca 100
ttggtaggcc ttggtacatg atgctggatt acctctctta aaatgacacc 150
attccctagcc tcttgggtgc gccctctggg gagctngagc ccagcatgct 200
gggagctggc gtctgtctca cacagttagc ccangtggc ccantcccg 250
ccaggtatgc ttccgtgtc ttacgttctg tccaagccat cagctccttg 300
ggantgatga acagagtcag aagcccaaa gaattgcant gtggcagcat 350
caganytant ngtcataagt gagaggcgtg tgttgantga ttgaccagc 400
gtcttcacaaa caaatggcag tgccttgctc anttaaaggg nccaaagntaa 450
atttghattg gttcatgtag tgaagtcaaa ntgtattcca gagatgttta 500
atgcacattt aanttattta atgtattcca tntcatgttt tcttattgtc 550
ataaggytac agttaatgct gctgtctgct gaantctgtt ggtggaantg 600
gtattgctg 609

<210> 281
<211> 493
<212> DNA
<213> Homo sapiens

<400> 281

gaccccttggg gagctggagc ccagcatgct ggggagtggc gtcagctcca 50
 caagtagtgc cccacgtggc ccactcccg ccacaggctgc ttccgtgtc 100
 caagttctg tccaagccat cagctccttg ggaactgatga acagagtcag 150
 aacccaaaag gaattgcact gtggcagcat cagaagtaact cgtcataagt 200
 gagaggggtg tgttgactga ttgacccagc gctttggaaa taaatggcag 250
 tgccttgctc acctaaaggg accaagctaa atttgtattg gttcatgtag 300
 tgaagtcaaa cgtttattca gagatgttta atgcataatt aacttattta 350
 atctatitca tctcatgttt ccttattgtc acaagagtac agttaatgct 400
 cactgcctgc gaactctgtc ggggtgaactg gtattgctgc tggaggggtg 450
 cagctccttc tgcctctgga gactctggtc atgtggaggt ggg 493

<211> 1-2
 <211> 27
 <211> DNA
 <211> Artificial Sequence

<221>
 <221> Synthetic oligonucleotide probe

<400> 291
 cccacccaggt aggtacttgt gtgaggc 27

<211> 1-3
 <211> 13
 <211> DNA
 <211> Artificial Sequence

<221>
 <221> Synthetic oligonucleotide probe

<400> 135
 caacacacaga gccacagacc ggg 23

<211> 1-4
 <211> 50
 <211> DNA
 <211> Artificial Sequence

<221>
 <221> Synthetic oligonucleotide probe

<400> 1-4
 cagagggatc atcgatgcag gggcctcaat taatgtatct gtgatgttac 50

<211> 1-6
 <211> 1360
 <211> DNA
 <211> Homo sapiens

<400> 295

ggagagctccg ggtgctgtgg cccggccttg gggggggggc ctccggctca 50
ggctggctga gaggctccca gctgcagcgt ccccgcccg ctcctcggga 100
gctctgatct cagctgacag tgcctcggg gacaaacaa gctcggcagg 150
gtctcacttt gttgcccagg ctggagttca gtgcacgat catggcttac 200
tgcagccttg acctccggg tccaagcag cctgctgagt agctgggaat 250
acaggacaaa attagaagat caaaatggaa aatctgctgc tctggctgat 300
attttccacc cctgggtgga ccttcattga tggatctgaa atggaatggg 350
attttatgtg gcacttgaga aaggtacccc ggattgtcag tgaaaggact 400
tcccatctca ccagcccccg atttgaggca gatgctaaga tgatggtaaa 450
cacagtgtgt ggcctogaat gccagaaaga actcccaact cccagccttc 500
ctgaattgga ggattatctt tctatgaga ctgtcttga gaatggcacc 550
cgaaccttaa ccagggtgaa agttcaagat ctggtctctg agccgaactca 600
aaatatcacc acaaggggag tatctgttag gaaaaagaga cagggtgtatg 650
gcaccgacag cagggtcagc atctcggaca aaaggtctct aaccaatttc 700
cctttcagca cagctgtgaa gcttccacc ggctgtagtg gcattctcat 750
tcccccacg catgttctaa ctgctgcaca cctgtctcat gatggaaagg 800
actatgtcaa agggagttaa aagctaaggg tagggctgtt gaagatgagg 850
aataaaagtg gaggaagaa acgtcagagt totaagagga gcaggagaga 900
agctagtggc ggtgacaaa gagagggtac cagagagcat ctgcaggaga 950
gagcgaaggg tgggagaaga agaaaaaat cgggcggggg ccagaggatt 1000
gcogaaggga ggccttcttc tcagtggacc cgggtcaaga ataccacat 1050
tcogaagggc tgggcacgag gaggcctggg ggaagctacc ttggaactatg 1100
actatgctct tctggagctg aagcgtgctc acaaaaagaa atacatggaa 1150
cttggaatca gcccaacgat caagaaaatg cctgggtggaa tgatccactt 1200
ctcaggattt gataacgata gggctgata gtgggtctat cggctttgca 1250
gtgtgtccga cgaatccaat gatctcttc accaatactg cgatgctgag 1300
tcgggctcca ccgggttcggg ggtctatctg cgtctgaaag atccagacaa 1350
aaagaattgg aagcgcaaaa tcattcggtt ctactcaggg caccagtggg 1400

tggatgtcaa cgggggttcag aaggactaca acgttgcgtgt tcgcatcact 1450
 cccctaaaaat aggcacagat ttgcctctgg attcacggga acgatgccaa 1500
 ttgtgcttac ggctaacaga gaacctgaaa agggcggtgt atcatctaaa 1550
 tcacagagaa aacacagctct gcttaacgta gtgagatcac ttcatagggt 1600
 atgcctggac ttgaactctg tcaatagcat tccaacatct tcaaaaatca 1650
 ggagatcttc gtccatttaa aaaatgtata ggtgcagata ttgaaactag 1700
 gtgggcactt caatgcacag tatatactct tctttacatg gtgatgagtt 1750
 tcatttgtag aaaaattctg ttgcctctct aaaaattaga cacactttaa 1800
 accttcaaac aggtattata aataacatgt gactccttaa tggacttatt 1850
 ctcagggttc tactctaaaga agaattcaat aggatgcctg ttgtgtatta 1900
 aatgtgaaat tgcatagata aaggtagatg gtaaagcaat tagtatcaga 1950
 atagagacag aaagttacaa cacagtttgt actactctga gatggatcca 2000
 ctcagctcat gccctcaatg tctatattgt gttatctgtt gggctcggga 2050
 catttagttt agttttcttg aagaattaca aatcagaaga aaaagcaagc 2100
 attataaaca aaactaataa ctgttttact gctttaagaa ataacaatta 2150
 caatgtgtat tatttaaaaa cgggagaaat agtttgtctt atgaaataaa 2200
 cctagtttag aaataggga gctgagacat tttaagatct caagtcttta 2250
 ttttaactaact actcaaaaata tggacttttc atgtatgcac aggggaagaca 2300
 cttcacaaat tatgaatgat catgtgttga aagccacact attttatgct 2350
 atacattcta tctatgaggt gctacatttt taggacaaag aattctgtaa 2400
 tctttttcaa gaaagagctt tctctctcct gacaaaatcc agctttctga 2450
 tgaggactat aggggtgaatt ctctgattag taattttaga tatgtccttt 2500
 cctaaaaatg aataaaaatt atgaatatga 2530

<210> 296
 <211> 413
 <212> PRT
 <213> Homo sapiens

<400> 296
 Met Glu Asn Met Leu Leu Trp Leu Ile Phe Phe Thr Pro Gly Trp
 1 5 10 15
 Thr Leu Ile Asp Gly Ser Glu Met Glu Trp Asp Phe Met Trp His

	20		25		30
Leu Arg Lys Val	Pro Arg Ile Val	Ser Glu Arg Thr Phe His	Leu		
	35		40		45
Thr Ser Pro Ala	Phe Glu Ala Asp Ala	Lys Met Met Val Asn Thr			
	50		55		60
Val Cys Gly Ile	Glu Cys Glu Lys Glu	Leu Pro Thr Pro Ser	Leu		
	65		70		75
Ser Glu Leu Glu	Asp Tyr Leu Ser Tyr	Glu Thr Val Phe Glu	Asn		
	80		85		90
Gly Thr Arg Thr	Leu Thr Arg Val Lys	Val Glu Asp Leu Val	Leu		
	95		100		105
Glu Pro Thr Glu	Asn Ile Thr Thr Lys	Gly Val Ser Val Arg	Arg		
	110		115		120
Lys Arg Glu Val	Tyr Gly Thr Asp Ser	Arg Phe Ser Ile Leu	Asp		
	125		130		135
Lys Arg Phe Leu	Thr Asn Phe Pro Phe	Ser Thr Ala Val Lys	Leu		
	140		145		150
Ser Thr Gly Cys	Ser Gly Ile Leu Ile	Ser Pro Glu His Val	Leu		
	155		160		165
Thr Ala Ala His	Cys Val His Asp Gly	Lys Asp Tyr Val Lys	Gly		
	170		175		180
Ser Lys Lys Leu	Arg Val Gly Leu Leu	Lys Met Arg Asn Lys	Ser		
	185		190		195
Gly Gly Lys Lys	Arg Arg Gly Ser Lys	Arg Ser Arg Arg Glu	Ala		
	200		205		210
Ser Gly Gly Asp	Glu Arg Glu Gly Thr	Arg Glu His Leu Glu	Glu		
	215		220		225
Arg Ala Lys Gly	Gly Arg Arg Arg Lys	Lys Ser Gly Arg Gly	Glu		
	230		235		240
Arg Ile Ala Glu	Gly Arg Pro Ser Phe	Glu Trp Thr Arg Val	Lys		
	245		250		255
Asn Thr His Ile	Pro Lys Gly Trp Ala	Arg Gly Gly Met Gly	Asp		
	260		265		270
Ala Thr Leu Asp	Tyr Asp Tyr Ala Leu	Leu Glu Leu Lys Arg	Ala		
	275		280		285
His Lys Lys Lys	Tyr Met Glu Leu Gly	Ile Ser Pro Thr Ile	Lys		
	290		295		300
Lys Met Pro Gly	Gly Met Ile His Phe	Ser Gly Phe Asp Asn	Asp		

305	310	315
Arg Ala Asp Gln Leu Val Tyr Arg Phe	Cys Ser Val Ser Asp Glu	
330	335	330
Ser Asn Asp Leu Leu Tyr Gln Tyr Cys	Asp Ala Glu Ser Gly Ser	
335	340	345
Thr Gly Ser Gly Val Tyr Leu Arg Leu	Lys Asp Pro Asp Lys Lys	
350	355	360
Asn Trp Lys Arg Lys Ile Ile Ala Val	Tyr Ser Gly His Gln Trp	
365	370	375
Val Asp Val His Gly Val Gln Lys Asp	Tyr Asn Val Ala Val Arg	
380	385	390
Ile Thr Pro Leu Lys Tyr Ala Gln Ile	Cys Leu Trp Ile His Gly	
395	400	405
Asn Asp Ala Asn Cys Ala Tyr Gly		
410		

<210> 197
 <211> 74
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 197
 ggaatctgcag gagagagcga aggg 24

<210> 198
 <211> 74
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 198
 ggaatctgcag gtgaatccag aggc 24

<210> 199
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 199
 ggaaggagga cttcctttca gtggaccgg gtcaagaata ccac 45

<210> 200

4211 1869

4212 DNA

4213 Homo sapiens

4400 300

aatgtgagag gggctgatgg aagctgatag gcaggactgg agtgtttagca 50
ccagtactgg atgtgacago aggcagagga gcacttagca gcttattcag 100
tgttcgatto tgattccggc aaggatccaa gcctggaatg ctggccgtcgg 150
gcaactccctg gcacactgct cctctttctg gctttccctg tcttgagttc 200
caggacccga cgtcccgagg aggcacggga cggcctatgg gatgcctggg 250
gcccattggag tgaatgctca cgcacctggc ggggaggggc ctcctactct 300
ctgaggccgt gcttgagcag caagagctgt gaaggaagaa atattccgata 350
cagaacatgc agtaatgtgg actgcaccac agaagcaggt gatttccgag 400
ctcagcaatg ctcagctcat aatgatgtca agcaccatgg ccagttttat 450
gaatggcttc ctgtgtctaa tgacctgac aacctatgt cactcaagtg 500
ccaagccaaa ggaaccaacc tggctgttga actagcact aaggctcttag 550
atggtacggc ttgtatata gaactcttgg atatgtgcat cagtggctta 600
tgccaaattg ttggctgga tccacagctg ggaagcaccg tcaaggaaga 650
taactgtggg gtctgcaacg gagatgggtc cactgcctgg ctggtccgag 700
ggcagtataa atccagctc tccgcaacca aatcggatga cactgttggt 750
gcacttccct atggaagtag acatattcgc ctgtgtctaa aaggctctga 800
tcaattatat ctggaaaaca aaacctcca ggggactaaa ggtgaaaaaa 850
gtctcagctc cacaggaact ctcttctgg acaattctag tgtggacttc 900
cagaaatttc cagacaaaga gatactgaga atggctggac cactcacagc 950
agatttcatt gtcaagatto gtaactcggc ctccgtctgac agtacagtc 1000
agttcatctt ctatcaaccc atcatccacc gatggaggga gaaggatttc 1050
tttctctgct cagcaacctg tggaggaggt tatcagctga catcggctga 1100
gtgttaogac ctgaggagca accgtgtggc tcttgaccac tactgtcact 1150
attacccaga gaacatcaaa cccaaaccca agcttcagga gtgcaacttg 1200
gatecttctc cagccagtga cggatacaag cagatcatgc cttatgacct 1250
ctaccatccc ctctctcggc gggaggccac cccatggacc gctgtctctc 1300

ootogtgtgg gggggggaac agagagcggg aggtttcttg tgtggaggag 1350
 gacatccagg ggcattgcac ttcagtggaa gagtggaaat gcatgtacac 1400
 ccctaagatg ccattcgggc agccctgcaa cttttttgac tgcctaaaat 1450
 ggctggcaac ggagtggtct ccgtgcacag tgacatgtgg ccaggggctc 1500
 agataccgtg tggtoctctg catcgacct ccaggaatgc acacaggagg 1550
 ctgtaggcca aaaacaaagc ccacataaaa agaggaatgc atcgtaccca 1600
 ctccctgcta taaaacaaaa gagaaacttc cagtcagggc caagttgcca 1650
 tggttcaaac aagctcaaga gctagaagaa ggagctgctg tgtcagagga 1700
 gcctctgtaa gttgtaaaag cacagactgc ctatatattg aaactgtttt 1750
 gtttaaaaga agcagtgctc cactggttgt agctttcctg gttctgaa 1800
 caagtgaat catctacca aagctttttg gctctcaaat taaagattga 1850
 ctactttcaa aaaaaaaaaa 1869

0010: 391
 0011: 525
 0012: PET
 0013: Himo sapiens

0000: 311
 Met Glu Cys Cys Arg Arg Ala Thr Pro Gly Thr Leu Leu Leu Phe
 1 5 10 15
 Leu Ala Phe Leu Leu Leu Ser Ser Arg Thr Ala Arg Ser Glu Glu
 20 25 30
 Asp Arg Asp Gly Leu Trp Asp Ala Trp Gly Pro Trp Ser Glu Cys
 35 40 45
 Ser Arg Thr Cys Gly Gly Gly Ala Ser Tyr Ser Leu Arg Arg Cys
 50 55 60
 Leu Ser Ser Lys Ser Cys Glu Gly Arg Asn Ile Arg Tyr Arg Thr
 65 70 75
 Cys Ser Asn Val Asp Cys Pro Pro Glu Ala Gly Asp Phe Arg Ala
 80 85 90
 Gln Gln Cys Ser Ala His Asn Asp Val Lys His His Gly Gln Phe
 95 100 105
 Tyr Glu Trp Leu Pro Val Ser Asn Asp Pro Asp Asn Pro Cys Ser
 110 115 120
 Leu Lys Cys Gln Ala Lys Gly Thr Thr Leu Val Val Glu Leu Ala
 125 130 135

Pro	Lys	Val	Leu	Asp	Gly	Thr	Arg	Cys	Tyr	Thr	Glu	Ser	Leu	Asp	
				140					145					150	
Met	Cys	Ile	Ser	Gly	Leu	Cys	Gln	Ile	Val	Gly	Cys	Asp	His	Gln	
				155					160					165	
Leu	Gly	Ser	Thr	Val	Lys	Glu	Asp	Asn	Cys	Gly	Val	Cys	Asn	Gly	
				170					175					180	
Asp	Gly	Ser	Thr	Cys	Arg	Leu	Val	Arg	Gly	Gln	Tyr	Lys	Ser	Gln	
				185					190					195	
Leu	Ser	Ala	Thr	Lys	Ser	Asp	Asp	Thr	Val	Val	Ala	Leu	Pro	Tyr	
				200					205					210	
Gly	Ser	Arg	His	Ile	Arg	Leu	Val	Leu	Lys	Gly	Pro	Asp	His	Leu	
				215					220					225	
Tyr	Leu	Glu	Thr	Lys	Thr	Leu	Gln	Gly	Thr	Lys	Gly	Gln	Asn	Ser	
				230					235					240	
Leu	Ser	Ser	Thr	Gly	Thr	Phe	Leu	Val	Asp	Asn	Ser	Ser	Val	Asp	
				245					250					255	
Phe	Gln	Lys	Phe	Pro	Asp	Lys	Glu	Ile	Leu	Arg	Met	Ala	Gly	Pro	
				260					265					270	
Leu	Thr	Ala	Asp	Phe	Ile	Val	Lys	Ile	Arg	Asn	Ser	Gly	Ser	Ala	
				275					280					285	
Asp	Ser	Thr	Val	Gln	Phe	Ile	Phe	Tyr	Gln	Pro	Ile	Ile	His	Arg	
				290					295					300	
Trp	Arg	Glu	Thr	Asp	Phe	Phe	Pro	Cys	Ser	Ala	Thr	Cys	Gly	Gly	
				305					310					315	
Gly	Tyr	Gln	Leu	Thr	Ser	Ala	Glu	Cys	Tyr	Asp	Leu	Arg	Ser	Asn	
				320					325					330	
Arg	Val	Val	Ala	Asp	Gln	Tyr	Cys	His	Tyr	Tyr	Pro	Glu	Asn	Ile	
				335					340					345	
Lys	Pro	Lys	Pro	Lys	Leu	Gln	Glu	Cys	Asn	Leu	Asp	Pro	Cys	Pro	
				350					355					360	
Ala	Ser	Asp	Gly	Tyr	Lys	Gln	Ile	Met	Pro	Tyr	Asp	Leu	Tyr	His	
				365					370					375	
Pro	Leu	Pro	Arg	Trp	Glu	Ala	Thr	Pro	Trp	Thr	Ala	Cys	Ser	Ser	
				380					385					390	
Ser	Cys	Gly	Gly	Gly	Ile	Gln	Ser	Arg	Ala	Val	Ser	Cys	Val	Glu	
				395					400					405	
Glu	Asp	Ile	Gln	Gly	His	Val	Thr	Ser	Val	Glu	Glu	Trp	Lys	Cys	
				410					415					420	

Met	Tyr	Thr	Pro	Lys	Met	Pro	Ile	Ala	Gln	Pro	Cys	Asn	Ile	Phe
				425					430					435
Asp	Cys	Pro	Lys	Trp	Leu	Ala	Gln	Glu	Trp	Ser	Pro	Cys	Thr	Val
				440					445					450
Thr	Cys	Gly	Gln	Gly	Leu	Arg	Tyr	Arg	Val	Val	Leu	Cys	Ile	Asp
				455					460					465
His	Arg	Gly	Met	His	Thr	Gly	Gly	Cys	Ser	Pro	Lys	Thr	Lys	Pro
				470					475					480
His	Ile	Lys	Glu	Glu	Cys	Ile	Val	Pro	Thr	Pro	Cys	Tyr	Lys	Pro
				485					490					495
Lys	Glu	Lys	Leu	Pro	Val	Glu	Ala	Lys	Leu	Pro	Trp	Phe	Lys	Gln
				500					505					510
Ala	Gln	Glu	Leu	Glu	Glu	Gly	Ala	Ala	Val	Ser	Glu	Glu	Pro	Ser
				515					520					525

0210 - 302
 0211 - 1533
 0212 - DNA
 0213 - Homo sapiens

0400 - 302
 gggacggggtg gggggggggt ggggaactcc ggtggagggg cgggtgggca 50
 ctggggcctg acagatggca gtggcactg cgggggcagt actggccgct 100
 ctgggggggg cgtctgtggt gggggccccc cggttcgtgg ggcccagggg 150
 ccaggggctg cgcagaggcg gggacccccc cctcatgcac ggggaagactg 200
 tggatgacac cggggggaac aggggcctgg gcggcgccac ggcggccagag 250
 ctactggccc tgggagggcg ggtgatcatg ggtcgccggg acggcgggcg 300
 tggcaggag ggggggggtc agctccgcgc cagactccgc caggccggcg 350
 agtggggccc agagcctggc gtcagcgggg tgggcagact catagtcggg 400
 gagctgggac tgcctcgtct ggcctcgggt cggcctttct gcacggaaaat 450
 gctccaggaa gagcctaggc tggatgtctt gatcaataac gcagggatct 500
 tccagtgcac ctacatgaag actgaagatg ggtttgagat gcagttcggg 550
 gtgaaccata tggggcactt ctactccacc aattctctcc ttggactcct 600
 caaagcttca gctcccagca ggattgtggt agttttctcc aaactttata 650
 aatcgggaga cacaattttt gatgacttga acagtgaaca aagctataat 700
 aaaagctttt gttatagcgc gagcaaacctg gctaaccatt tttttaccag 750

ggaactagcc ggccgcttag aaggcacaaa tgtnacccgc aatgtgttgc 800
 atcttggtat tgtacggaca aatctgggga ggcacataca cattccactg 850
 ttggtcaaac cactcttcaa ttctgtgtca tgggtttttt ccaaaaactc 900
 agtagaaggt gccagactt ccatttattt ggctcttca cctgaggtag 950
 aaggagtgtc aggaagatac ttctgggact gtaagagga agaactgttg 1000
 cccaaagcta tggatgaac tcttgcaaga aaactctggg atatcagtga 1050
 agtjatggtt ggctgtctaa aataggaaca aggagtaaaa gagctgttta 1100
 taactctga tctcagttat atctgtgac aggaatgggt tggattgaga 1150
 acttggttact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200
 ggtacatgtg ggtattttgg agtctctgaa aaattatttt tgggataaga 1250
 gaatttcagc aaagatgttt taaatatata tcttaagtat aatgaataat 1300
 aagtacatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350
 tggatgacat attaatattt gtcagaatta agtgactcaa agtctatctg 1400
 agaggttttt caagtatctt tgagtctcat ggcacaaagt ttaactagtt 1450
 ttactacaat gtttgggtgt tctgtggaaa tctctgctt ggtgtgtgca 1500
 cacaagctct acttggaata aatttactgg tac 1533

(210) 303
 (211) 316
 (212) PRT
 (213) Homo sapiens

(400) 303
 Met Ala Val Ala Thr Ala Ala Ala Val Leu Ala Ala Leu Gly Gly
 1 5 10 15
 Ala Leu Trp Leu Ala Ala Arg Arg Phe Val Gly Pro Arg Val Gln
 20 25 30
 Arg Leu Arg Arg Gly Gly Asp Pro Gly Leu Met His Gly Lys Thr
 35 40 45
 Val Leu Ile Thr Gly Ala Asn Ser Gly Leu Gly Arg Ala Thr Ala
 50 55 60
 Ala Glu Leu Leu Arg Leu Gly Ala Arg Val Ile Met Gly Cys Arg
 65 70 75
 Asp Arg Ala Arg Ala Glu Glu Ala Ala Gly Gln Leu Arg Arg Glu
 80 85 90
 Leu Arg Gln Ala Ala Glu Cys Gly Pro Glu Pro Gly Val Ser Gly

	95	100	105
Val Gly Glu Leu	Ile Val Arg Glu Leu Asp	Leu Ala Ser Leu Arg	
	110	115	120
Ser Val Arg Ala	Phe Cys Gln Glu Met	Leu Gln Glu Glu Pro Arg	
	125	130	135
Leu Asp Val Leu	Ile Asn Asn Ala Gly	Ile Phe Gln Cys Pro Tyr	
	140	145	150
Met Lys Thr Glu	Asp Gly Phe Glu Met	Gln Phe Gly Val Asn His	
	155	160	165
Leu Gly His Phe	Leu Leu Thr Asn Leu	Leu Leu Gly Leu Leu Lys	
	170	175	180
Ser Ser Ala Pro	Ser Arg Ile Val Val	Val Ser Ser Lys Leu Tyr	
	185	190	195
Lys Tyr Gly Asp	Ile Asn Phe Asp Asp	Leu Asn Ser Glu Gln Ser	
	200	205	210
Tyr Asn Lys Ser	Phe Cys Tyr Ser Arg	Ser Lys Leu Ala Asn Ile	
	215	220	225
Leu Phe Thr Arg	Glu Leu Ala Arg Arg	Leu Glu Gly Thr Asn Val	
	230	235	240
Thr Val Asn Val	Leu His Pro Gly Ile	Val Arg Thr Asn Leu Gly	
	245	250	255
Arg His Ile His	Ile Pro Leu Leu Val	Lys Pro Leu Phe Asn Leu	
	260	265	270
Val Ser Trp Ala	Phe Phe Lys Thr Pro	Val Glu Gly Ala Gln Thr	
	275	280	285
Ser Ile Tyr Leu	Ala Ser Ser Pro Glu	Val Glu Gly Val Ser Gly	
	290	295	300
Arg Tyr Phe Gly	Asp Cys Lys Glu Glu	Glu Leu Leu Pro Lys Ala	
	305	310	315
Met Asp Glu Ser	Val Ala Arg Lys Leu	Trp Asp Ile Ser Glu Val	
	320	325	330
Met Val Gly Leu	Leu Lys		
	335		

<110> 354
 <111> 521
 <120> DNA
 <130> Homo sapiens

<200>
 <221> unsure

<222> 31, 34, 62, 87, 221, 229
<223> unknown base

<410> 214
ggggaattgta aagaggaagn actgtgccc aagntatgga tgaatctgtt 50
ggaagaaaat tntgggatat cagtgaagtg atgggttngcc tgctaaaata 100
gganccaggga gtaaaagagc tgtttataaa actgcatatc agttatatct 150
gtgatcagga atggtgtgga ttgagaacct gttacttgaa gaaaaagaat 200
tttcatattg gaatagccctg ntaagaggna catgtgggta ttttgagatt 250
actgaanaat tatttttggg ataagagaat ttacgcaaag atgtttttaa 300
tatatatagt aagtataatg aataataagt acaatgaaaa atacaattat 350
attttaaaat tataactggg caagccatgga tgacatatta atatttgcca 400
gaattagtgt actcaaatgt ctatcgagag gtttttcaag tatctttgag 450
tttcattgac aaagtgttaa ctagttttac tacaatgttt ggtgtttgtg 500
tggaaattat ctgcctggct t 521

<410> 305
<411> 34
<412> DNA
<413> Artificial Sequence

<420>
<423> Synthetic oligonucleotide probe

<430> 305
ccacggaatg ctccaggaag agcc 24

<440> 306
<441> 34
<442> DNA
<443> Artificial Sequence

<450>
<453> Synthetic oligonucleotide probe

<460> 306
cccaatgaca ccaaattgaa gagtgg 26

<470> 307
<471> 47
<472> DNA
<473> Artificial Sequence

<480>
<483> Synthetic oligonucleotide probe

<490> 307

aaagcaggga ttttccagtg ccttccatg agactgaag atggg 45

1210 • 308
1211 • 1123
1212 • DNA
1213 • Homo sapiens

1214 • 308
gagaggagga ggtgocgctg cctggagaat cctccgctgc cgtcggctcc 50
aggagcccag ccccttccca acccaaccca acctagccca gtcccagccg 100
ccagcgcctg tccctgtcac ggaccccagc gttaccatgc atcctgcctg 150
cttccctacc ttaccagacc ccagatgctc ccttctgctc ctggtaacct 200
gggtttttac cccctgaaca actgaataaa caagtcttgc tacagagaat 250
atagatgaaa ttttaacaaa tcttgatgtt gctttagtaa atttttatgc 300
tgaatgggtg cgtttccagtc agatgttgca tccaattttt gaggaagctt 350
ccgatgtcat taaggagaa tttcccaatg aaaatccagt agtgcctgca 400
agaatcgatc gtgacacga cctcgacata gccagagat acaggataag 450
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 500
aatccagggg ccagcgatca gtgaaagcat tggcagatta catcaggcaa 550
caaaaaagtg accccattca agaaattcgg gacttagcag aaatcaccaa 600
ctctgatcgc agcaaaagaa atatcattgg atatttcgag caaaaggact 650
cggacaacta tagagttttt gaacgagtag cgaatatttt gcctgatgac 700
tgtgcctttc tttctgcatt tggggatgtt tcaaaaacgg aaagatatag 750
tggcgacaa acatcttaca aaccaccagg gcattctgtt ccggatatgg 800
tgtacttggg agctatgaca aattttgatg tgacttacaa tgggattcaa 850
gataaatgtg ttcctctgtt ccgagaaata acatttgaaa atggagagga 900
attgacagaa gaaggactgc cttttctcat actctttcac atgaaagaag 950
atacagaaaag tttagaaata ttcagaaatg aagttagctg gcaattaata 1000
agtgaaaaaag gtacaataaa ctttttccat gcgattgtg acaaatttag 1050
acatccctct ctgcacatac agaaaaactcc agcagattgt cctgtaactg 1100
ctattgacag ctttaggcac atgtatgtgt cgggagactt caaagatgta 1150
ttaattcctg gaaaaactca gcaattcgta ttgacttac attctygaag 1200
actgcacaga gaattccatc atggactga cccaactgat acagccccag 1250

gagagcaagg ccaagatgta gcaagcagtc cacctgagag ctcccttcag 1300
 aaactagcac ccagtgaaata taggtatact ctattgaggg atcgagatga 1350
 cctttaaaaa cttgaaaaac agtttgtaag cctttcaaca gcagcatcaa 1400
 cctacgtggt ggaaatagta aacctatatt ttcataatto tatgtgtatt 1450
 tttattttga ataaacagaa agaaatttaa aaaaaaiaaaa aaaaaaiaaaa 1500
 aaaaaaiaaaa aaaaaaiaaaa aaa 1523

<110> 309
 <111> 496
 <112> PRT
 <113> Homo sapiens

<401> 309
 Met His Pro Ala Val Phe Leu Ser Leu Pro Asp Leu Arg Cys Ser
 1 5 10 15
 Leu Leu Leu Leu Val Thr Trp Val Phe Thr Pro Val Thr Thr Glu
 20 25 30
 Ile Thr Ser Leu Ala Thr Glu Asn Ile Asp Glu Ile Leu Asn Asn
 35 40 45
 Ala Asp Val Ala Leu Val Asn Phe Tyr Ala Asp Trp Cys Arg Phe
 50 55 60
 Ser Gln Met Leu His Pro Ile Phe Glu Glu Ala Ser Asp Val Ile
 65 70 75
 Lys Glu Glu Phe Pro Asn Glu Asn Gln Val Val Phe Ala Arg Val
 80 85 90
 Asp Cys Asp Gln His Ser Asp Ile Ala Gln Arg Tyr Arg Ile Ser
 95 100 105
 Lys Tyr Pro Thr Leu Lys Leu Phe Arg Asn Gly Met Met Met Lys
 110 115 120
 Arg Glu Tyr Arg Gly Gln Arg Ser Val Lys Ala Leu Ala Asp Tyr
 125 130 135
 Ile Arg Gln Gln Lys Ser Asp Pro Ile Gln Glu Ile Arg Asp Leu
 140 145 150
 Ala Glu Ile Thr Thr Leu Asp Arg Ser Lys Arg Asn Ile Ile Gly
 155 160 165
 Tyr Phe Glu Gln Lys Asp Ser Asp Asn Tyr Arg Val Phe Glu Arg
 170 175 180
 Val Ala Asn Ile Leu His Asp Asp Cys Ala Phe Leu Ser Ala Phe
 185 190 195

Gly Asp Val Ser Lys Pro Glu Arg Tyr Ser Gly Asp Asn Ile Ile	200	205	210
Tyr Lys Pro Pro Gly His Ser Ala Pro Asp Met Val Tyr Leu Gly	215	220	225
Ala Met Thr Asn Phe Asp Val Thr Tyr Asn Trp Ile Gln Asp Lys	230	235	240
Cys Val Pro Leu Val Arg Glu Ile Thr Phe Glu Asn Gly Glu Glu	245	250	255
Leu Thr Glu Glu Gly Leu Pro Phe Leu Ile Leu Phe His Met Lys	260	265	270
Glu Asp Thr Glu Ser Leu Glu Ile Phe Gln Asn Glu Val Ala Arg	275	280	285
Gln Leu Ile Ser Glu Lys Gly Thr Ile Asn Phe Leu His Ala Asp	290	295	300
Cys Asp Lys Phe Arg His Pro Leu Leu His Ile Gln Lys Thr Pro	305	310	315
Ala Asp Cys Pro Val Ile Ala Ile Asp Ser Phe Arg His Met Tyr	320	325	330
Val Phe Gly Asp Phe Lys Asp Val Leu Ile Pro Gly Lys Leu Lys	335	340	345
Gln Phe Val Phe Asp Leu His Ser Gly Lys Leu His Arg Glu Phe	350	355	360
His His Gly Pro Asp Pro Thr Asp Thr Ala Pro Gly Glu Gln Ala	365	370	375
Gln Asp Val Ala Ser Ser Pro Pro Glu Ser Ser Phe Gln Lys Leu	380	385	390
Ala Pro Ser Glu Tyr Arg Tyr Thr Leu Leu Arg Asp Arg Asp Glu	395	400	405

Leu

<210> 310
 <211> 182
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 36, 48
 <223> unknown base

 <400> 310

attaaggaag aatttccaaa tgaaaatcaa gtagtntttg ccagagtnga 50
 ttgtgatcag cactctgaca tagccagag atacaggata agcaaatacc 100
 caaacctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150
 ggtagggat cagtgaagc attggcagat ta 182

<110> 311
 <111> 538
 <112> DNA
 <113> Homo sapiens

<120>
 <121> unsure
 <122> 31, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 596
 <123> unknown base

<400> 311
 ataggcctct ctggaagttg tccgggtgt tggcggcggg agccggggtc 50
 gacaggacna ggtgcgcgtg cctggagaat cctcgcgtgc cgtcggctcc 100
 cggagccag ccttttcta acccaaccca acctagcccn gtcccagccg 150
 caacggctcg cctctgctc ggacccagc gtnaccatgc atcctgcctt 200
 attctatcc ctaccagac ctgatgctc cctctgctc ctggtaactt 250
 gggctttac cctgtaacca actgaaataa cngctcttga taccnagaat 300
 atagatgaaa ttttaacna tctgtatgtg gcttagtca attcttatgc 350
 tgaatgggtg cgtttcagtc agatgtggca tccaattttt gaggangctt 400
 cccatgcat taaggaagaa tttccaatg aaaatcaagt agtgtttgca 450
 acagttgact gtgatcagca cctgcacata gcccagagat acaggataag 500
 caatatcca accctcaat tgtttcgtaa tgggatgatg atgaagagag 550
 caatccaggg taagcgatca gtgaagcat tggcagatta catcagga 596

<110> 312
 <111> 22
 <112> DNA
 <113> Artificial Sequence

<120>
 <121> Synthetic oligonucleotide probe

<400> 312
 tgaaggcct ctctggaagt tg 22

<110> 313
 <111> 19
 <112> DNA

4112 Artificial Sequence

4112

4112 Synthetic oligonucleotide probe

4401 313

cttagagatc agtgaaagc 19

4110 314

4111 19

4111 RNA

4111 Artificial Sequence

4110

4110 Synthetic oligonucleotide probe

4400 314

cccaaatgaa gtagctggc 29

4110 315

4111 19

4111 RNA

4111 Artificial Sequence

4110

4110 Synthetic oligonucleotide probe

4400 315

ccgcctcaca atgcattgtc 20

4110 316

4111 19

4111 RNA

4111 Artificial Sequence

4110

4110 Synthetic oligonucleotide probe

4400 316

catctggcag gaattgtcc 19

4110 317

4111 18

4111 RNA

4111 Artificial Sequence

4110

4110 Synthetic oligonucleotide probe

4400 317

cgtgcctatag gccaaagg 18

4110 318

4111 14

4111 RNA

4111 Artificial Sequence

<220>

<225> Synthetic oligonucleotide probe

<226> 319

ctgtatctct gggctatgtc agag 24

<227> 319

<228> 25

<229> DNA

<230> Artificial Sequence

<231>

<235> Synthetic oligonucleotide probe

<236> 319

ctacatataa tggcacatgt cagac 25

<237> 319

<238> 46

<239> DNA

<240> Artificial Sequence

<241>

<245> Synthetic oligonucleotide probe

<246> 319

cgtcttctta tctttaccgg acctcagatg ctcccttctg ctctg 46

<247> 321

<248> 1333

<249> DNA

<250> Homo sapiens

<400> 321

ggccacgctg cagatggcgt tcaagttcgc ggccctctgc tacatgctgg 50

cgtctgctgt cactgcgcgc ctcctctctt cggccatttg gcacattata 100

gcctctgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150

tacccctaat ccccttgtaa tcccagagta cctcctccac gcttctctct 200

gggtcaggtt cctttgtgca gcagagtggc ttacactggg tctcaatatg 250

ccctctctgg catatcatat ttggaggtat atgagtagac cagtcatgag 300

tggccacagga cctatgacc ctacaacct catgaatgca gatattctag 350

catattgtca gaaggaagga tgggtgcaaat tagcttttta ccttctagca 400

tttttttact acctatattg catgatctat gttttggaga gctcttagaa 450

caacacacag aagaattggc ccagttaagt gcatgcaaaa agccaccaaa 500

tgaagggtat ctatccagca agatcctgtc caagagtagc ctgtggaatc 550

tgatcagtta ctttaaaaaa tgactctta ttttttaaat gtttccacat 600

ttttgottgt ggaaagactg ttttcatatg ttatactcag ataaagattt 651
 taaatggtat taagtataaa ttaatatata atgattacct ctggtgttga 701
 caggtttttaa ctggaacttc ttaaggaaca gccataatcc tctgaatgat 751
 gcattaatta ctgaactgtcc tagtacattg gaagcttttg tttataggaa 801
 ctgtgagggc tcatttttgt ttcatgaaa cagtatctaa ttataaatta 851
 gctgtagata tcaggtgctt ctgatgaagt gaaaatgtat atctgactag 901
 tggtaaaact catgggttcc ctcatctgtc atgtcgatga ttatatatgg 951
 atacatttcc aaaaaataaaa agcgggaatt ttcccttccg ttgaatatta 1001
 tccctgtata ctgatgaat gagagatttc ccataatttc atcagagtaa 1051
 taaatatact tgccttaatt ctttaagcata agtaaacatg atataaaaaa 1101
 atatgotgaa ttacttgtga agaattgcatt taaagctatt ttaaattgtg 1151
 ttttatttgt aagacattac ttattaagaa attggttatt atgcttactg 1201
 ttcataatcc gggttaaagg cattcttaag aatttgcagg tactacagat 1251
 ttttaaaact gaatgagaga aaattgtata accatcttgc tgttctttaa 1301
 ctggaatata ataaaactct gaaattaaga ctc 1333

<M10> 332
 <M11> 144
 <M12> PRT
 <M13> Homo sapiens

<M00> 332
 Met Ala Phe Thr Phe Ala Ala Phe Cys Tyr Met Leu Ala Leu Leu
 1 5 10 15
 Leu Thr Ala Ala Leu Ile Phe Phe Ala Ile Trp His Ile Ile Ala
 20 25 30
 Phe Asp Glu Leu Lys Thr Asp Tyr Lys Asn Pro Ile Asp Gln Cys
 35 40 45
 Asn Thr Leu Asn Pro Leu Val Leu Pro Glu Tyr Leu Ile His Ala
 50 55 60
 Phe Phe Cys Val Met Phe Leu Cys Ala Ala Glu Trp Leu Thr Leu
 65 70 75
 Gly Leu Asn Met Pro Leu Leu Ala Tyr His Ile Trp Arg Tyr Met
 80 85 90
 Ser Arg Pro Val Met Ser Gly Pro Gly Leu Tyr Asp Pro Thr Thr
 95 100 105

Ile Met Asn Ala Asp Ile Leu Ala Tyr Cys Gln Lys Glu Gly Trp
 110 115 120

Cys Lys Leu Ala Phe Tyr Leu Leu Ala Phe Phe Tyr Tyr Leu Tyr
 125 130 135

Gly Met Ile Tyr Val Leu Val Ser Ser
 140

<110> 323
 <111> 477
 <112> DNA
 <113> Homo sapiens

<110> 323
 attatagcat ttgatgagct gaagactgat tacaagatcc tatagaccag 50
 tgaataccgc tgaatccctc tgtactccca gactacccca tccacgcttc 100
 ctctctgctc atgtttcttc gtgcagcaga gtggccttaca ctgggtctca 150
 atatgcccct ctgggcctat catattcgga ggtatctgag tagaccagt 200
 atgagtgccc caggactcct tgaacctaca accatcatga atgcagatat 250
 tctagcttat tgcacagaag aaggatggcg caaattagct tctctcttc 300
 tggcaatttc ttaactaccta tatggcatga tctatgtttt ggtgagctct 350
 tggaaacaca cacagaagaa ttggtccagt taagtgcctg caaaaagcca 400
 ccaaatgaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450
 gantctctat agttacttta aaaaatg 477

<110> 314
 <111> 41
 <112> DNA
 <113> Artificial Sequence

<110>
 <111> Synthetic oligonucleotide probe

<110> 324
 tctaaacaga cggccagttt aatagacctg caattattaa tct 43

<110> 325
 <111> 41
 <112> DNA
 <113> Artificial Sequence

<110>
 <111> Synthetic oligonucleotide probe

<110> 325
 ccaggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 226
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 226
gtccagcaga gtggcttaca 20

<210> 317
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 317
actggaccaa ttcttctgtg 20

<210> 319
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 319
catattctag catattgtca gaaggaagga tgggtgcaat tagct 45

<210> 319
<211> 1174
<212> DNA
<213> Homo sapiens

<400> 319
gggagcgttg ggggaaaccc ttccgagaaa acagcaacaa gctgagctgc 50
tgtcacagag gggacaaga tgggggggccc gaaggggagc ctctgggtga 100
ggacccaaat ggggtcccg ccgttgtctg tctgacccat ggcttggccc 150
ggaggttcgg ggacgcttc ggtgaagca ttgactcgg tcttgggtga 200
taacgctct tgcacccgg ccgttcagtt gaactacccc ttgcacacct 250
acctaagga agaggagttg taagcatgtc agagaggttg caggctgttt 300
tcaatttgtc agtttctgga tcatggaatt gaattaaatc gaactaaatt 350
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400
atgottgcac tcttgggttg cagaatcagc tgcattcgc tgaactgaga 450

caaqaacaac ttatgtccct gatgcaaaa atgcacctac tctttcctct 500
 aactctgggtg aggtcattct ggagtgacat gatggactcc gcacagagct 550
 tcataacctc ttcatggact ttttatcttc aagccgatga cggaaaaata 600
 gttatattcc agtctaagcc agaaatccag tacgcaccac atttgagaca 650
 ggagcctaca aatttgagag aatcatctct aagcaaatg tcttatctgc 700
 aaatgagaaa ttccacaagc cacaggaatt ttcttgaaga tggagaaaag 750
 gatggctctt taagatgctt ctctcttaac ctggggtgga ttttaactac 800
 aactcttgct ctctgggtga tgggtattgt tgggatttgt tgtgcaactg 850
 tctctacagc tctggagcag tatgttccct ctgagaagct gactatctat 900
 ggtgaactgg agtttatgaa tgaacaaaag ctaaacagat atccagcttc 950
 tctctctgtg gttgttagat ctaaaactga agatcatgaa gaagcagggc 1000
 ctatactac aaaagtgaat ctgtctcatt ctgaatttta agcatttttc 1050
 ttttaaaaga caagtgaat agacatctaa aattccactc ctcatagagc 1100
 ttttaaaatg gtttcattgg atataggcct taagaaatca ctataaaatg 1150
 caataaaagt tactcaactc tgtg 1174

<210> 330
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 330
 Met Ala Ala Pro Lys Gly Ser Leu Trp Val Arg Thr Gln Leu Gly
 1 5 10 15
 Leu Pro Pro Leu Leu Leu Leu Thr Met Ala Leu Ala Gly Gly Ser
 20 25 30
 Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp Thr
 35 40 45
 Ala Ser Cys His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr
 50 55 60
 Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg
 65 70 75
 Leu Phe Ser Ile Cys Gln Phe Val Asp Asp Gly Ile Asp Leu Asn
 80 85 90
 Arg Thr Lys Leu Glu Cys Glu Ser Ala Cys Thr Glu Ala Tyr Ser
 95 100 105

Gln Ser Asp Glu	Gln Tyr Ala Cys His	Leu Gly Cys Gln Asn Gln	114	115	116
Leu Pro Phe Ala	Glu Leu Arg Gln Glu	Gln Leu Met Ser Leu Met	125	130	135
Pro Lys Met His	Leu Leu Phe Pro Leu	Thr Leu Val Arg Ser Phe	140	145	150
Trp Ser Asp Met	Met Asp Ser Ala Gln	Ser Phe Ile Thr Ser Ser	155	160	165
Trp Thr Phe Tyr	Leu Gln Ala Asp Asp	Gly Lys Ile Val Ile Phe	170	175	180
Gln Ser Lys Pro	Glu Ile Gln Tyr Ala	Pro His Leu Glu Gln Glu	185	190	195
Pro Thr Asn Leu	Arg Glu Ser Ser Leu	Ser Lys Met Ser Tyr Leu	200	205	210
Gln Met Arg Asn	Ser Gln Ala His Arg	Asn Phe Leu Glu Asp Gly	215	220	225
Glu Ser Asp Gly	Phe Leu Arg Cys Leu	Ser Leu Asn Ser Gly Trp	230	235	240
Ile Leu Thr Thr	Thr Leu Val Leu Ser	Val Met Val Leu Leu Trp	245	250	255
Ile Cys Cys Ala	Thr Val Ala Thr Ala	Val Glu Gln Tyr Val Pro	260	265	270
Ser Glu Lys Leu	Ser Ile Tyr Gly Asp	Leu Glu Phe Met Asn Glu	275	280	285
Gln Lys Leu Asn	Arg Tyr Pro Ala Ser	Ser Leu Val Val Val Arg	290	295	300
Ser Lys Thr Glu	Asp His Glu Glu Ala	Gly Pro Leu Pro Thr Lys	305	310	315
Val Asn Leu Ala	His Ser Glu Ile		320		

<210> 331
 <211> 350
 <212> DNA
 <213> Homo sapiens

<400> 331
 ttgggtgata cggcgctcttg ccacggggcc tgttcagttga cctaccctt 5'
 gcacacctac cctaaggaag aggagttgta cgcattgtcag agaggttgca 10'
 ggctgttttc aattttgtcag tttgtggatg atggaattga cttaaatcga 15'

actaaattgg aatgtgaatc tgcattgtaca gaagcatatt cccaattctga 200
 tgagcaatat gcttgccatc ttggttgcca gaatcagctg ccattccttg 250
 aactgagaca agaacaactt atgtccctga tgcbaaaaat gcacctactc 300
 tttctctata ctctgggtgag gtcattctgg agtgacatga tggactccgc 350

<210> 322
 <211> 502
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 41
 <223> unknown base

<240> 372
 caacttggcc ggatctttta gactcccttg accttgacca agggctcngga 30
 aaacagcaac aagctgagct gctgtgacag agggacaacag atggcggcgc 100
 ggaaggtagc ctttgggtga ggaaccaact ggggctcccg ccgctgctgc 150
 tctgcaaat ggcttggcc ggaggttcgg ggaacgcttc ggtggaagca 210
 tttaactcgg tcttgggtga taagggtct tgcacccggg cctgtcagtt 250
 gaactacccc ttgcacact accttaagga agaggagttg taogcatgtc 300
 agagaggttg caggtgtctt ccaatttgc agtttgtgga tgatggaatt 350
 gacttaactc gaactaaatt ggaatgtgaa tctgcatgta cagaagcata 410
 tccccattct gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450
 tgcatttgc tgaactgaga caagaacaac ttatgtccct gatgcacaaa 500
 atgcactac tctttctct aactctggtg aggtcattct ggagtgcacat 550
 gatggattcc gc 562

<210> 373
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<240> 373
 caaagcagag ctgctgtgac ag 22

<210> 374
 <211> 22

<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 334
tgattctggg aaccaagatg gc 22

<212> 335
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<225> Synthetic oligonucleotide probe

<400> 335
atggcctagg ccggaggttc ggggacgcct tcggctgaag 40

<212> 336
<211> 1-85
<212> DNA
<213> Homo sapiens

<400> 336
tcggaggtggc gatcgctgag aggcaggagg gcgcaggcgg gcctgggagg 50
gggcacggag gtggggcgcc gctggggcgc gccgcacgg gcttcactctg 100
agggcgcacg gcccgcgacc gagcgtgcgg actggcctcc caagcgtggg 150
tcggacaagct gccggagctg caatgggcgc ccgctgggga ttctgtttcg 200
tccctctggg ccgcgtgttg ctgctcagct cgggcacagg agaggagcag 250
cccccggaga cagcggcaca gaggtgcttc tgcacaggtt gtggtaactt 300
ggatgattgt acctgtgatg ttgaaacct tgatagattt aataactaca 350
ggcttttccc aagactacaa aaactctctg aaagtgaata ctttaggtat 400
taccaggtaa acctgaagag gccgtgtcct ttctggaatg acatcagcca 450
gtgtgggaaga agggactgtg ctgtcaaac atgtcaatct gatgaagttc 500
ctgatggaat taaatctgcg agctacaagt attctgaaga agccaataat 550
ctctttgaag aatgtgaaca agctgaacga ctgggagcag tggatgaata 600
tctgagtgag gaaacacaga aggtgtttct tcagtggaac aagcatgatg 650
attcttcaga taactctgtg gaagctgatg acattcagtc ccttgaagct 700
gaatatgtag atttgcttct taactctgag cgtacactg gttacaaggg 750
accagatgct tggaaaatat ggaatgtcat ctacgaagaa aactgtttta 800

agccacagac aattaaaaga ccttttaaat ctttgggttc tggtaagg 850
 acaagtgaag agaacccttt ttacagttgg ctagaaggto totgtgtaga 900
 aaaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950
 tgcatttgag tgcagatat cttttacaag agacctgggt agaaaagaaa 1000
 tggggacaca acattacaga atttcaacag cgatttgatg gaattttgac 1050
 tgaaggagaa ggtccaagaa ggottaagaa cttgtatttt ctctaactaa 1100
 tgaactaag ggcttttatc aaagtgttac cattcttoga ggcgccagat 1150
 ttccaactct ttaactggaa taaaattcag gatgaggaaa acaaaatgtt 1200
 actcttggaa atacttcag aaatcaagtc atttcctttg cattttgatg 1250
 agaattcatt tttgtctggg gataaaaaag aagcacacaa actaaaggag 1300
 gaatttcgac tgcattttag aaatatttca agaattatgg attgtgttgg 1350
 ttgtttttaa tgttgtctgt ggggaaagct ccagaactcag ggtttgggca 1400
 ctgtcttgaa gatcttattt cctgagaaat tgatagcaaa tatgccagaa 1450
 agtggaccta gttatgaatt ccacttaacc agacaagaaa tagtatcatt 1500
 attcaagca tttggaagaa ttctacaag tgtgaaagaa ttagaaaact 1550
 ccaggaaact gttacagaat attcattaaa gaaaacaagc tgatatgtgc 1600
 ctgtttctgg acaatggagg cgaaagagtg gaatttcatt caaaggcata 1650
 atagcaatga cagtottaag ccaaacattt tatataaagt tgcctttgta 1700
 aaggagaatt atattgtttt aagtaaacac atttttaaaa attgtgttaa 1750
 gtctatgtat aataactctg tgagtaaaag taatacttca ataactgtgt 1800
 acaaatittt aagtttaata ttgaataaaa ggaggattat caaattaaaa 1850
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 1885

<310> 337
 <311> 468
 <312> PET
 <313> Homo sapiens

<400> 337
 Met Gly Arg Gly Trp Gly Phe Leu Phe Gly Leu Leu Gly Ala Val
 1 5 10 15
 Trp Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr
 20 25 30

Ala	Ala	Gln	Arg	Cys	Phe	Cys	Gln	Val	Ser	Gly	Tyr	Leu	Asp	Asp			
				35					40					45			
Cys	Thr	Cys	Asp	Val	Glu	Thr	Ile	Asp	Arg	Phe	Asn	Asn	Tyr	Arg			
				50					55					60			
Leu	Phe	Pro	Arg	Leu	Gln	Lys	Leu	Leu	Glu	Ser	Asp	Tyr	Phe	Arg			
				65					70					75			
Tyr	Tyr	Lys	Val	Asn	Leu	Lys	Arg	Pro	Cys	Pro	Phe	Trp	Asn	Asp			
				80					85					90			
Ile	Ser	Gln	Cys	Gly	Arg	Arg	Asp	Cys	Ala	Val	Lys	Pro	Cys	Gln			
				95					100					105			
Ser	Asp	Glu	Val	Pro	Asp	Gly	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Tyr			
				110					115					120			
Ser	Glu	Glu	Ala	Asn	Asn	Leu	Ile	Glu	Glu	Cys	Glu	Gln	Ala	Glu			
				125					130					135			
Arg	Leu	Gly	Ala	Val	Asp	Gln	Ser	Leu	Ser	Glu	Glu	Thr	Gln	Lys			
				140					145					150			
Ala	Val	Leu	Gln	Trp	Thr	Lys	His	Asp	Asp	Ser	Ser	Asp	Asn	Phe			
				155					160					165			
Cys	Glu	Ala	Asp	Asp	Ile	Gln	Ser	Pro	Gln	Ala	Glu	Tyr	Val	Asp			
				170					175					180			
Leu	Leu	Leu	Asn	Pro	Glu	Arg	Tyr	Thr	Gly	Tyr	Lys	Gly	Pro	Asp			
				185					190					195			
Ala	Trp	Lys	Ile	Trp	Asn	Val	Ile	Tyr	Gln	Glu	Asn	Cys	Phe	Lys			
				200					205					210			
Pro	Gln	Thr	Ile	Lys	Arg	Pro	Leu	Asn	Pro	Leu	Ala	Ser	Gly	Gln			
				215					220					225			
Gly	Thr	Ser	Glu	Glu	Asn	Thr	Phe	Tyr	Ser	Trp	Leu	Glu	Gly	Leu			
				230					235					240			
Cys	Val	Glu	Lys	Arg	Ala	Phe	Tyr	Arg	Leu	Ile	Ser	Gly	Leu	His			
				245					250					255			
Ala	Ser	Ile	Asn	Val	His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Gln			
				260					265					270			
Thr	Trp	Leu	Glu	Lys	Lys	Trp	Gly	His	Asn	Ile	Thr	Gln	Phe	Gln			
				275					280					285			
Gln	Arg	Phe	Asp	Gly	Ile	Leu	Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg			
				290					295					300			
Leu	Lys	Asn	Leu	Tyr	Phe	Leu	Tyr	Leu	Ile	Glu	Leu	Arg	Ala	Leu			
				305					310					315			

Ser	Lys	Val	Leu	Pro	Phe	Phe	Glu	Arg	Pro	Asp	Phe	Gln	Leu	Phe	331	332	333
Thr	Gly	Asn	Lys	Ile	Gln	Asp	Glu	Glu	Asn	Lys	Met	Leu	Leu	Leu	334	340	343
Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu	His	Phe	Asp	Gln	350	355	360
Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Lys	Glu	Ala	His	Lys	Leu	Lys	363	370	373
Glu	Asp	Phe	Arg	Leu	His	Phe	Arg	Asn	Ile	Ser	Arg	Ile	Met	Asp	380	385	390
Lys	Val	Gly	Cys	Phe	Lys	Cys	Arg	Leu	Trp	Gly	Lys	Leu	Gln	Thr	395	400	405
Gln	Gly	Leu	Gly	Thr	Ala	Leu	Lys	Ile	Leu	Phe	Ser	Glu	Lys	Leu	410	415	420
Ile	Ala	Asn	Met	Pro	Glu	Ser	Gly	Pro	Ser	Tyr	Glu	Phe	His	Leu	425	430	435
Thr	Arg	Gln	Glu	Ile	Val	Ser	Leu	Phe	Asn	Ala	Phe	Gly	Arg	Ile	440	445	450
Ser	Thr	Ser	Val	Lys	Glu	Leu	Glu	Asn	Phe	Arg	Asn	Leu	Leu	Gln	455	460	465

Asn Ile His

<211> 338
 <211> 507
 <212> DNA
 <213> Homo sapiens

<214>
 <221> unsure
 <222> 1-1, 263, 370, 397, 426
 <223> unknown base

<401> 338
 gctggaaata tggatgcat ctacgagaaa ctgttttaag ccacagacaa 50
 ttaaaaaac tttaaactct ttggcttctg gtcaagggaag aagtgaagag 100
 nacacttttt acagtttgtt agaaggtctc tgtgtagaaa aaagagcatt 150
 ctacagaatt atatctggcc tacatgcaag cattaatgtg catttgagtg 200
 caagatatct ttacaagag acctggttag aaaagaaatg gggacacaac 250
 attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300
 tccaagaagg cttaagaact tgtattttct ctacttaata gaactaaggg 350

ttttatccaa agtggttacca ttcttngagc gccagattt tcaactnttt 400
actggaaata aaattcagga tgaggnaaac aaaatgttac ttttgaaaat 450
acttcatgaa atcaagtcac ttcttttgca tttgatgag aattcatttt 500
tttgctg 507

<210> 339
<211> 20
<212> RNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 339
aaattgcagg agtcgaatg 20

<210> 340
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 340
ttgtttctta atctgagcg c 21

<210> 341
<211> 20
<212> RNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 341
aaaggaggac ttctgactgc 20

<210> 342
<211> 16
<212> RNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 342
agatattcat ccactgtccc aagtcg 26

<210> 343
<211> 25
<212> RNA
<213> Artificial Sequence

4220 -

4223 - Synthetic oligonucleotide probe

4400 - 343

tggtccajaaa cagggacata tcagc 25

4210 - 344

4211 - 50

4212 - DNA

4213 - Artificial Sequence

4220 -

4223 - Synthetic oligonucleotide probe

4401 - 344

agagagaggc acagaggtgc ttctggcagg ttagtggtta cttggatgat 50

4210 - 345

4211 - 1486

4212 - DNA

4213 - Homo sapiens

4600 - 345

gggaggggtg gggggagggg tggggggagc ggtgggttgg gaggggggag 51

gatgggaggg aaagtgaaga aaacagaaaa ggagagggag agagggcaga 100

ggattttcca tactggacag aaacagatca ggcattggaac tcccttcgt 150

tactcaatcg ttctggccc tgggtgttct gacaggtctc tctcccccct 200

ttaacctgga tgaacatcac ccacgcttat tcccagggcc accagaagct 250

gaatttggat acagtgtctt acaacatgtt gggggtggag agcgatggat 300

ctcgggtggc gcccctggg atgggccttc aggcgacggg aggggggagc 350

ttctatcgctg cccctgtagg gggggcccac atgcccctat tgccaagggc 400

caattaggtg actaccaact gggaaattca tctcatctcg ctgtgaatat 450

ccacctgggg atgtctctgt tagagacaga tggatgagg ggatttcattg 500

tgaactaagg agaggggtgt ggcagtgtct ctgaaggtcc ataaaagaaa 550

aaagagaagt gtggttaaggg aaaatggtct gtgtggaggg gtcaaggagt 600

taaaaacccc agaaagcaaa aggttaggtaa tgtcagggag tagcttccat 650

gcctcttcca actgggagca tgttctgagg gtgccttccc aagcctggga 700

gtactatatt ccccctccc caggcctgtg cccctctctg gtctctgtct 750

tgttgcagct ctgtcttcag ttctgggata tctgcccgtg tggatgcttc 800

atttcagcct caggggaagcc tggcacccac tgcccaacgt gagccagagg 850

aaggetgagt acctgggttc cagaaggaga tactggglgg gaaaaagatg 900
aggcaaaagg gtatgatgcc tggcaaaagg cctgcatggc tatcttcatt 950
ctacctaatt gtgcttgaaa aagctccatg ttctctaaca gattcagact 1000
ctgggcacgg tgtggtggcc cacacctgta attctagcac ttggggaggg 1050
aaaggtgggc agatcacttg aggtcaggag ttcaagacca gcctgggcaa 1100
catggtgaaa ctccatctct actaaaaaaaa aaaaaatata aaaattagct 1150
gggtggcgta gtgcattgct gtaactccat ctactgggga ggctaagaca 1200
ggagactctc acttcaaccc agggagtgga ggttggggtg agccaagatt 1250
ctgcctctgc actctagagt gggtagacaga gtaaggagaga ctccatctca 1300
aaaaataata taataataat tcagactcct tatcaggagt ccattgatctg 1350
gcctggcaca gtaactcatg cctgtaatcc caacattttg ggaggccaac 1400
gcaggaggat tgccttgagt ctggaggttt gagaccagcc tgggcaacat 1450
agaaagaccc catctctaaa taaatgtttt aaaaat 1486

<210> 346
<211> 124
<212> PRT
<213> Homo sapiens

<400> 346
Met Glu Leu Pro Phe Val Thr His Leu Phe Leu Pro Leu Val Phe
1 5 10 15
Leu Thr Gly Leu Cys Ser Pro Phe Asn Leu Asp Glu His His Pro
20 25 30
Arg Leu Phe Pro Gly Pro Pro Glu Ala Glu Phe Gly Tyr Ser Val
35 40 45
Leu Gln His Val Gly Gly Gly Gln Arg Trp Met Leu Val Gly Ala
50 55 60
Pro Trp Asp Gly Pro Ser Gly Asp Arg Arg Gly Asp Val Tyr Arg
65 70 75
Cys Pro Val Gly Gly Ala His Asn Ala Pro Cys Ala Lys Gly His
80 85 90
Leu Gly Asp Tyr Gln Leu Gly Asn Ser Ser His Pro Ala Val Asn
95 100 105
Met His Leu Gly Met Ser Leu Leu Glu Thr Asp Gly Asp Gly Gly
110 115 120

Phe Met Val Ser

<210> 347
<211> 509
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 22
<223> unknown base

<400> 347
cttcagttccac caccatcact cntcccatto cttcccaactt tatttttttagc 50
ttcccatctgg gaggggggag gatggggagg aaagtgaaga aaacagaaaa 100
gagagagagac agaggccaga ggactttctca tactggacag aaaccgatca 150
gcatgaaac tcccttctgt cactcactg ttcttgccac tgggtgttct 200
gacaggtctc tgcctccctt ttaacctgga tgaacatcac ccacgcctat 250
tccacagggcc accagaagct gaatttggat acagtgtctt acaacatggt 300
gagggtagac agcgatggt gatggtggg gccctctggg atgggccttc 350
agcgagcgg aggggggag tttatcgtg cctgttaggg gggggccaca 400
atgcccctat tgccaagggc cacttaggtg actaccaact gggaaattca 450
ctccatctgt ctgtgaatat gcacctgggg atgtctctgt tagagacaga 500
tcttgatgg 509

<210> 348
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 348
cagagagag gccagaggac ttc 23

<210> 349
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 349
caggtgcata ttacagcag gatg 24

4010 + 350
4011 + 45
4012 + DNA
4013 + Artificial Sequence

4020 +
4021 + Synthetic oligonucleotide probe

4400 + 350
ggaaactccac ttctgtacac accgtgttctt gcccttggtg ttctt 45

4010 + 351
4011 + 2156
4012 + DNA
4013 + Homo sapiens

4400 + 351
aaagttaacat ttctcttgga actctcttag gccactccct gctgatgcaa 50
catctggggtt tgggcagaaa ggaggggtgct tcggagcccg ccttttttga 100
gcttcttggtt ccggctctag aacaattcag gcttcgctgc gactcagacc 150
tcactctcaa catatgcatt ctgaagaaag atggctgaga tcgacagaaat 200
gtttctctctt ggaaagaaa cactgtcttag gtcaaacctga gctcaccaaa 250
tcagagaattt cacaatgggt ctagaagaaa tctggacaag cctttttcatg 300
tcgtttttctt aagcattgat tccatgtttg ctccacagatg aagtggccat 350
tcctctgtgc cctcagaacc cctctgtact ctcaaccacc atgaagcacc 400
tccttgatgtg gagcccgctg atctggcctg gagaaacagt gtactattct 450
gtctgaatacc aggggggagta ccgagagcctg tacaagagcc acatctggat 500
ccctagccagc tcgtgctcac tcaactgaagg tcttgagtgt gatgtcaactg 550
atgacatcac ggcactgtg ccatacaacc ttctgttcag ggcacacctg 600
ggctcacaga cctcagcctg ggcctcctg aagcctcctt ttaataaaaa 650
ctcaaccacc cttaccagac ctgggatgga gatcaaaaa gatggcttcc 700
accctggttat tcagctggag gacctggggc ccaggtttga gttcctgtg 750
gcttactgga ggagggagcc tgggtccag gagcatgtca aaatggtgag 800
gagtggggtt attccagtgc accagaaa cctggagcca ggggtctgat 850
actgtgtgaa ggcacagaca ttctggaagg ccattgggag gtacagccgc 900
ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccttggt 950
actggccctg ttctcctttg ttggcttcat gctgacctt gtggtcgtgc 1000

caatgttctgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050
 gtggttggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatnagctgc agaagggagg aggtggatgc ctgtgccaag gctgtgatgt 1150
 ctcttgagga actcctcagg gcttggtatc cataggtttg cgggaagggc 1200
 cagutgaagc cagagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt ctgtttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagctctgtt cctacaagtc tagaagcaac catcagagga agggctggtt 1350
 gtcataacaga acaactgactg aggccttaggg gatgtgacct ctgactggg 1400
 ggcctgcaat tgcctggctga gcaacctgg gaaaagtga ttcaccttt 1450
 aggtcctaag tttctcacc tctaattggg gaattaccta cacacctgt 1500
 aaacacacac acacagagtc cctctctata tatacacacg tacacataaa 1550
 tacacccagc acttgcaagg cttagaggaa actggtgaca ctctacagtc 1600
 tgaatgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac cctacacact gggctggcttg gagagccac tttccagaa 1700
 caatcttga gagaaaagga atcatgggag caatggtgtt gagtccact 1750
 caaycccaat gccggtgcag aggggaatgg cttagggagc cctacagtag 1800
 gtgaacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 accgaggatc catgaactac tctaagtgt tgcagtgtg tgcacactgc 1900
 agacagcagg tgaatgtat gtgtgcaatg cgaacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttc tttctgttg taaagtacag 2000
 aattcagcaa ataaaaaggg ccacctggc caaaagcgtt aaaaaaaaaa 2050
 aaaaaa 2056

<210> 352
 <211> 511
 <212> PRT
 <213> Homo sapiens

<210> 352
 Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu
 1 5 10 15
 Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp
 20 25 30

Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser	35	40	45
Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro	50	55	60
Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu	65	70	75
Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser	80	85	90
Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala	95	100	105
Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln	110	115	120
Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser	125	130	135
Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe	140	145	150
His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe	155	160	165
Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val	170	175	180
Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met	185	190	195
Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys	200	205	210
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu	215	220	225
Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe	230	235	240
Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp	245	250	255
Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val	260	265	270
Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile	275	280	285
Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met	290	295	300
Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser	305	310	

<210> 353
<211> 354
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 614, 711, 746, 827
<223> unknown base

<400> 353
tctctgctgat gcacatctgg gtttggcaaa aggaggttgc ttgagagcgc 50
cctttctagc ttcttggcgc gctctagaac aattcaggtc tctctggcgc 100
tggacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
agaatgcctt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
ccaatgcag actttcaca tggttctaga agaaatctgg acaagtcttt 250
tcagtctggt tttctacgca ttgattccat gtttgcctac agatgaagtg 300
gcaattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
gcctctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
attctcttgc ataccagggg gactacgaga gcctgtacac gagccacata 450
tggatctcca gcagctgggt ctcaactcact gaaggtcctg agtgtgatgt 500
cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550
cattgggtct acagacctca gcctggagca tctgaagca tccctttaat 600
agaaactcaa ccactcttac ccgacctggg atggagatca ccaaagatgg 650
cttccaactg gttattgagc tggaggacct ggggccccag ttgaggttc 700
ctgtggacta ntggaggagg ggogaacccc ttgoggogca aggggttngc 750
gaacctcttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
tgcaccccat actcaatatg gacgaantgc tattgtccac ctgtttgagt 850
ggaccttggt tgat 864

<210> 314
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> Synthetic oligonucleotide probe

<400> 314
aggcttctgct gcgactagac ctc 23

4210 - 255
4211 - 24
4212 - DNA
4213 - Artificial Sequence

4220 -
4221 - Synthetic oligonucleotide probe

4400 - 395
ctcagtcggg taaggatggt tgag 24

4210 - 316
4211 - 50
4212 - DNA
4213 - Artificial Sequence

4220 -
4221 - Synthetic oligonucleotide probe

4400 - 316
ctttatagca ttgattccat gtttgctcac agatgaagtg gcattctgc 50

4210 - 357
4211 - 1670
4212 - DNA
4213 - Homo sapiens

4401 - 357
ccacacagtc cgcacacgag ccgagggaac aagagagaag agagactgaa 50
acagggagaa gaggcaggag aggaggaggt ggggagagca cgaagctgga 100
gttcgacact gagggagggc gggaggaggt gaagaaggag agaggggaga 150
ataggcagga gctggaaaag agagagggag gaggaggagg agatggggga 200
tggagaactg gagttagggt gottgggaga gottaatgaa aagagaacgg 250
ataggaggtg tgggttagga accaagaggt agccctgtgg gcagcagaag 300
gttgagagga gtaggaagat caggagctag agggagactg gagggttccg 350
ggaaaatgag agaggaaaag ggaaagacac agagagacgg gagagagaag 400
agagtcgggt ttgaaggggc gatctcagtc cctgggtgct ttggcatttg 450
tggaaactgg actccctgtg gggaggagag gaaagctgga agtccctggg 500
gtacagggtc ccagaaggag gggacagagg agctgagaga ggggggcagg 550
gagttgggca ggggtccctc ggaggccctcc tggggatggg ggctgcagct 600
cgtctgagcg cccctcgagc gctggtactc tgggctgcac tgggggcagc 650
agctcacatc ggaccagcac ctgaccccca ggactggtgg agctacaagg 700

ataattctca gggaaacttc gtgcagggg ctctttctg gggcctggg 750
 aatgcagcgt ggagtctgtg tgcctgtggg aagcggcaga gccccgtgga 800
 tctggagctg aagaggggttc ttatgaccc cttctgccc ccattaaggg 850
 tcagcactgg aggagagaag ctccggggaa ccttgtacaa caccggccga 900
 catgtctcct tctgcctgc accccgacct gtggccaatg tgtctggagg 950
 tccctccttt tacagccacc gactcagtga actgoggctg ctgtctggag 1000
 cctcgagcgg agcgggctcg gaacatcaga tcaaccacca gggcttctct 1050
 gctgaggtgc agtcattca cttcaaccag gaactctag ggaatttcag 1100
 cgtgcctcc ccgggcccc atggcctggc cattctcaga cctcttgcca 1150
 acgttgccag taccctatac ccattctca gtgcctcct taaccggac 1200
 accatcctc gcatctctca caagaatgat gcctacttc tccaagacct 1250
 gagctggag ctctgttcc ctgaatcct ccgcttcct accatcagg 1300
 cctctctcag caccccgccc tgcctcaga ctgtcaactg gatctcatt 1350
 gacggggccc tcaatatac ctcccttcag atgcactccc tgagactcct 1400
 gacccagaat cctccatctc agatcttcca gagctcaga ggtaacagcc 1450
 ggcctctgca gccctgggc caccgggccc tgagggggaa cagggacccc 1500
 cggcaccocg agagggctg ccgagggccc aactaccgoc tgcctgtgga 1550
 tgggtccccc catggctcgt gagactcccc ttgaggatt gcaccggccc 1600
 gtctaagcc tcccacaag gcgaggggag ttaacctaa aacaaagcta 1650
 tcaagggac agaatactta 1670

<110> 313
 <111> 323
 <112> PET
 <113> Homo sapiens

<401> 313
 Met Gly Ala Ala Ala Arg Leu Ser Ala Pro Arg Ala Leu Val Leu
 1 5 10 15
 Trp Ala Ala Leu Gly Ala Ala Ala His Ile Gly Pro Ala Pro Asp
 20 25 30
 Pro Glu Asp Trp Trp Ser Tyr Lys Asp Asn Leu Gln Gly Asn Phe
 35 40 45
 Val Pro Gly Pro Pro Phe Trp Gly Leu Val Asn Ala Ala Trp Ser
 50 55 60

Leu	Cys	Ala	Val	Gly	Lys	Arg	Gln	Ser	Pro	Val	Asp	Val	Glu	Leu	65	70	75
Lys	Arg	Val	Leu	Tyr	Asp	Pro	Phe	Leu	Pro	Pro	Leu	Arg	Leu	Ser	80	85	90
Thr	Gly	Gly	Glu	Lys	Leu	Arg	Gly	Thr	Leu	Tyr	Asn	Thr	Gly	Arg	95	100	105
His	Val	Ser	Phe	Leu	Pro	Ala	Pro	Arg	Pro	Val	Val	Asn	Val	Ser	110	115	120
Gly	Gly	Pro	Leu	Leu	Tyr	Ser	His	Arg	Leu	Ser	Glu	Leu	Arg	Leu	125	130	135
Leu	Phe	Gly	Ala	Arg	Asp	Gly	Ala	Gly	Ser	Glu	His	Gln	Ile	Asn	140	145	150
His	Gln	Gly	Phe	Ser	Ala	Glu	Val	Gln	Leu	Ile	His	Phe	Asn	Gln	155	160	165
Glu	Leu	Tyr	Gly	Asn	Phe	Ser	Ala	Ala	Ser	Arg	Gly	Pro	Asn	Gly	170	175	180
Leu	Ala	Ile	Leu	Ser	Leu	Phe	Val	Asn	Val	Ala	Ser	Thr	Ser	Asn	185	190	195
Pro	Phe	Leu	Ser	Arg	Leu	Leu	Asn	Arg	Asp	Thr	Ile	Thr	Arg	Ile	200	205	210
Ser	Tyr	Lys	Asn	Asp	Ala	Tyr	Phe	Leu	Gln	Asp	Leu	Ser	Leu	Glu	215	220	225
Leu	Leu	Phe	Pro	Glu	Ser	Phe	Gly	Phe	Ile	Thr	Tyr	Gln	Gly	Ser	230	235	240
Leu	Ser	Thr	Pro	Pro	Cys	Ser	Glu	Thr	Val	Thr	Trp	Ile	Leu	Ile	245	250	255
Asp	Arg	Ala	Leu	Asn	Ile	Thr	Ser	Leu	Gln	Met	His	Ser	Leu	Arg	260	265	270
Leu	Leu	Ser	Gln	Asn	Pro	Pro	Ser	Gln	Ile	Phe	Gln	Ser	Leu	Ser	275	280	285
Gly	Asn	Ser	Arg	Pro	Leu	Gln	Pro	Leu	Ala	His	Arg	Ala	Leu	Arg	290	295	300
Gly	Asn	Arg	Asp	Pro	Arg	His	Pro	Glu	Arg	Arg	Cys	Arg	Gly	Pro	305	310	315
Asn	Tyr	Arg	Leu	His	Val	Asp	Gly	Val	Pro	His	Gly	Arg			320	325	

<210> 359

<211> 24

<212> DNA
<213> Artificial Sequence

<439>
<439> Synthetic oligonucleotide probe

<499> 159
tcgctgagg tgcagtcac tcac 24

<210> 160
<211> 24
<212> DNA
<213> Artificial Sequence

<439>
<439> Synthetic oligonucleotide probe

<499> 160
gaggtctgg aagatctgag atgg 24

<210> 161
<211> 50
<212> DNA
<213> Artificial Sequence

<439>
<439> Synthetic oligonucleotide probe

<499> 161
gactcttctg caacttggc agtaactcta accattctc cagtgcctc 50

<210> 162
<211> 533
<212> DNA
<213> Homo sapiens

<499> 162
ggcctctggt ctggcgcgta ctggctgtac ggagcaggag caagaggctg 50
ccgccaact ccgcgcgcga gctcgtctcg tgtcccgcc cctcgtctct 100
gcactactg ctacaaaacg ctggggcgcc cactctggca gactaaagaa 150
gcactcctt tccacccca actgcaggtc taattttgga cgtcttgct 200
gcatctctt ccaggctgag ggagccgcag aggcggaggc tcgcttcttc 250
ctgcagtcag caccacgctc gccccggac gctcggctgt caggcccttc 300
ggagcgggg ctctcgtct cgggtccctt gtgaaggctc tggcgggctg 350
cagaggccg ccgtccggtt tggctcact ctccaggaa acttcacact 400
ggagagccaa aaggagtgg agagcctgtc ctggagattt tctgggggaa 450
atctgaggt cattcattat gaagtgtacc ggcggggagt ggctcagagt 500

aactacagtg ctgttcatgg ctagagcaat tccagccatg gtggttccca 550
atgccacttt attggagaaa cttttggaaa aatacatgga tgaggatggt 600
gagtgggtgga tagccaaaaca acgagggaaa agggccatca cagacaatga 650
catgcagagt attttggacc ttcataataa attacgaagt caggtgtatc 700
caacagccctc taatatggag tatatgacat gggatgtaga gctggaaaga 750
cttgacagaat cctgggctga aagttgcttg tgggaacatg gacctgcaag 800
cttgcttcca tcaattggac agaatttggg agcacactgg ggaagatata 850
ggcccccagc gttccatgta caatcgtggt atgatgaagt gaaagacttt 900
agctacccat atgaacatga atgcaaccca tattgtccat ccaggtgctc 950
tggccctgta cgtacacatt atacacaggt cgtgtgggca actagtaaca 1000
gaatcgggtt tggcattaat ttgtgtcata acatgaacat ctgggggcag 1050
atatggccca aagctgtcta cctgggtgtg aattaactcc caaagggaaa 1100
ctgggtggggc catgcccctt acaaacatgg gggccctgt ctctgtgtgc 1150
cacctagttt cggagggggc tgtagagaaa atctgtgcta caaagaaggg 1200
tcagacaggt attatccccc tcgagaagag gaaacaaatg aaatagaacy 1250
acagccagtc caagtccatg acacccatgt ccggacaaga tcagatgata 1300
gtagccagaaa tgaagtcata agccacacgc aaatgtccca aattgtttct 1350
tgtgaagtaa gattaagaga tcagtgcaca ggaacaccc gccaataggta 1400
ogaatgtctt gctggctgtt tggatagtaa agctaaagtc attggcagtg 1450
tcattatga aatgcaatcc agcatctgta gagctgcaat tcattatggt 1500
ataatagaca atgatgggtg ctgggttagat atcaactagc aaggaagaaa 1550
gcattatttc atcaagtcca atagaaatgg tattcaaaac attggcaaat 1600
atcagttctg taattccttc acagtctcta aagtaacagt tcaggtgtg 1650
acttgtgaaa caactgtgga acagctctgt ccatttcata agcctgtctc 1700
acattgcccc agagtatact gtccctcgtaa ctgtatgcac gcaaatccac 1750
attatgctcg tgtaattgga actcagagttt attctgatct gtccagtatc 1800
tgcagagcag cagtacatgc tggagtgggt ccgaaatcac gtgggttatgt 1850
tgatgtaatg cctgtggaca aaagaaagac ctacattgct tcttttcaga 1900
atggaatctt ctacagaaagt ttacagaatc ctccaggagg aaaggcattc 1950

agagtgtttg ctgttgtgtg aaactgaata cttggaagag gaaccataaag 2000
 actattccaa atgcaatatt totgaatttt gtataaaaact gtaacattac 2050
 tgtacagagt acatcaacta ttttcagccc aaaaagggtg caaatgcata 2100
 taaatcttga taaacaaagt ctataaaaata aaacatggga cattagcttt 2150
 gggaaaagta atgaaaatat aatgggtttta gaaatctgtt gttaaatatt 2200
 gctatatttt cttagcagtt atttctacag ttaattacat agtcatgatt 2250
 gttctagtt tcatatatta tatgggtgctt tgtatatgoc actaataaaa 2300
 tgaatctaaa cattgaatgt gaatggccct cagaaaatca cctagtgcac 2350
 ttaaaaaataa tgcactctaa aactgaaaga aaccttatca cttctccccc 2400
 agttcaatgc tatgcacata ccaactccaa ataattctaa ataattttcc 2450
 acttaataac tgtaaaagttt tttctgttta atttaggcac atagaatatt 2500
 aaattctgat attgcacttc ctattttata taaaataatc ctttaatatc 2550
 caaatgaatc tgttaaaatg cttgattcct tgggaatgga cttaaaaata 2600
 aatgtaataa agtcagagtg gtgggtatgaa aacattctta gtgatcatgt 2650
 agtaaatgta gggctaagca tggacagcca gagctttcta tctaactgta 2700
 aaattgaggt cacatatctt cttttgtacc ctggcaataa ctctgcagc 2750
 ccaggaagta taatagcaaa aagttgaaca aagatgaact aatgtattac 2800
 attacatttg ccactgattt tttttaaatg gtaaatgacc ttgtatataa 2850
 atattgcacat accatggtac ctataatggt gatataatttg tttctatgaa 2900
 aaatgtattg tgccttgata ctaaaaatct gtaaaatgtt agttttggta 2950
 attttttttt tgcctggtaga tttacatatt aaattttttt tgcctggtaga 3000
 caaacattaa aattaatcat gtttcaaaaa aaaaaaaa 3038

<210> 363
 <211> 500
 <212> PRT
 <213> Homo sapiens

<400> 363
 Met Lys Cys Thr Ala Arg Glu Trp Leu Arg Val Thr Thr Val Leu
 1 5 10 15
 Phe Met Ala Arg Ala Ile Pro Ala Met Val Val Pro Asn Ala Thr
 20 25 30

Leu	Leu	Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu	
				85					40					45	
Trp	Trp	Ile	Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn	
				50					55					60	
Asp	Met	Gln	Ser	Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln	
				65					70					75	
Val	Tyr	Pro	Thr	Ala	Ser	Asn	Met	Gln	Tyr	Met	Thr	Trp	Asp	Val	
				80					85					90	
Glu	Leu	Glu	Arg	Ser	Ala	Gln	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp	
				95					100					105	
Glu	His	Gly	Pro	Ala	Ser	Leu	Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu	
				110					115					120	
Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg	Pro	Pro	Thr	Phe	His	Val	Gln	
				125					130					135	
Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe	Ser	Tyr	Pro	Tyr	Glu	His	
				140					145					150	
Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys	Ser	Gly	Pro	Val	Cys	
				155					160					165	
Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser	Asn	Arg	Ile	Gly	
				170					175					180	
Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp	Gly	Gln	Ile	
				185					190					195	
Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro	Lys	Gly	
				200					205					210	
Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys	Ser	
				215					220					225	
Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys	
				230					235					240	
Tyr	Lys	Gln	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Gln	Gln	
				245					250					255	
Thr	Asn	Gln	Ile	Gln	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His	
				260					265					270	
Val	Arg	Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser	
				275					280					285	
Ala	Gln	Gln	Met	Ser	Gln	Ile	Val	Ser	Cys	Glu	Val	Arg	Leu	Arg	
				290					295					300	
Asp	Gln	Cys	Lys	Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala	
				305					310					315	

Gly	Cys	Leu	Asp	Ser	Lys	Ala	Lys	Val	Ile	Gly	Ser	Val	His	Tyr
				330					335					340

Gln	Met	Gln	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Ile	His	Tyr	Gly	Ile
				335					340					345

Ile	Asp	Asn	Asp	Gly	Gly	Trp	Val	Asp	Ile	Thr	Arg	Gln	Gly	Arg
				350					355					360

Lys	His	Tyr	Phe	Ile	Lys	Ser	Asn	Arg	Asn	Gly	Ile	Gln	Thr	Ile
				365					370					375

Gly	Lys	Tyr	Gln	Ser	Ala	Asn	Ser	Phe	Thr	Val	Ser	Lys	Val	Thr
				375					380					385

Val	Gln	Ala	Val	Thr	Cys	Glu	Thr	Thr	Val	Glu	Gln	Leu	Cys	Pro
				390					395					400

Phe	His	Lys	Pro	Ala	Ser	His	Cys	Pro	Arg	Val	Tyr	Cys	Pro	Arg
				405					410					415

Asn	Cys	Met	Gln	Ala	Asn	Pro	His	Tyr	Ala	Arg	Val	Ile	Gly	Thr
				420					425					430

Arg	Val	Tyr	Ser	Asp	Leu	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Val	His
				440					445					450

Ala	Gly	Val	Val	Arg	Asn	His	Gly	Gly	Tyr	Val	Asp	Val	Met	Pro
				455					460					465

Val	Asp	Lys	Arg	Lys	Thr	Tyr	Ile	Ala	Ser	Phe	Gln	Asn	Gly	Ile
				470					475					480

Phe	Ser	Glu	Ser	Leu	Gln	Asn	Pro	Pro	Gly	Gly	Lys	Ala	Phe	Arg
				485					490					495

Val	Phe	Ala	Val	Val
				500

<313> 164
 <313> 14
 <313> DNA
 <313> Artificial Sequence

<313>
 <313> Synthetic oligonucleotide probe

<403> 164
 agacagcatt tgggagcaca ctgg 24

<413> 165
 <413> 10
 <413> DNA
 <413> Artificial Sequence

<413>
 <413> Synthetic oligonucleotide probe

<410> 365
ccaaagagtat actgtcctcg 20

<410> 366
<411> 25
<412> DNA
<413> Artificial Sequence

<420>
<423> Synthetic oligonucleotide probe

<440> 366
cgcacagatt ttctctacag ccccc 25

<410> 367
<411> 24
<412> DNA
<413> Artificial Sequence

<420>
<423> Synthetic oligonucleotide probe

<460> 367
cactartcca gcatgtactg ctgc 24

<410> 368
<411> 30
<412> DNA
<413> Artificial Sequence

<420>
<423> Synthetic oligonucleotide probe

<490> 368
ccatttcaggt gttctggccc tgtatgtaca cattatacac aggtcgtgtg 50

<410> 369
<411> 1645
<412> DNA
<413> Homo sapiens

<410> 369
cgggagacaa ggcagagcg cagcgacgg ccacagacag cctgggcac 50
cctatgaagg cgcagcggga gccagcagag ccggaaggcg cgcgccgggc 100
cctagaaagcc ggcagagct gggcggcgtc ccggggcgcc cgtccagacg 150
cgcagagccc ctccccatgt cctgtctccc agcccgcgcc cctccgggtc 200
cctatgaggct cctggcgggc gcgtgtctcc tgcgtgtgtt ggcgctgtac 250
cctcgcggtg tggacgggtc caaatgcaag tgcctccgga agggacccaa 300
cctccgctac agcgacgtga agaagctgga aatgaagcca aagtaaccgc 350

actgagagga gaagatgggt atcatcacca ccaagagcgt gtccaggtac 410
 cgagggtcagg agcaactgctt gcaccccaag ctgcagagca ccaagcgctt 450
 catcaagtgg tacaacgctt ggaaacagaa ggcaggggtc tacgaagaat 500
 aggggtgaaaa acctcagaag ggaaaaactc aaaccagttg ggagacttgt 550
 gcaaaaggact ttgcagatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaagcctctc tctctcacag gcataagaca caaattatat 650
 attgttatga agcaactctc accaacgggt agtttttaca ttttatagct 700
 ggggtggaaa ggcttcacga tgggagaccc atctctcttg tgcctcagac 750
 ttcacacacg gctgctctct atcaaaaagg ggaaaaactc tgcctctct 800
 tcttaaaaaa tgcctctctg tcttcttcca tacgtcacta tacatctyag 850
 ctttataaga gcccgggagg aacaatgagc ttgggtggac cacttcactg 900
 cagtgttgtt ccattcctag cttgggaagc ttcggcttag aggtcctygc 950
 gcttcggcac agctgcacg ggctctctct ggcttatggc cggtcacagc 1000
 ctcaggttga ctcacagtg gcccctgtag cggggcaagc aggagcaggt 1050
 cctcttgcac ctgttctctg aggaactcaa gtttgggtgc cagaaaaatg 1100
 tgcctcattc ccccctgggt aatttttaca caccctagga aacatttcca 1150
 agatcctytg atggcgagac aaatgatctt taaagaaggt gtygggtctt 1200
 tcccaacttg aggattctg aaaggttcac aggttcaata ttaatgctt 1250
 cagaagcatg tgaggttccc aacactgtca gcaaaaaact taggagaaaa 1300
 cttaaaaata tatgaataca tgcgcaatac acagctacag acacacatto 1350
 tgttgacaag ggaaaaactt caaagcatgt cctcttctct caccacaaca 1400
 gaacatgcag tactaaagca atatatctgt gattccctat gtaattcttc 1450
 aatgttaaaa agtgcagtc ccttttcgaaa gctaagatga ccctgcgccc 1500
 tttctctctg acatataccc ttaagaaagc cccctccaca cactgcgccc 1550
 cagtatatgc cgcattgtac tgcctgttta tatgctatgt acatgtcaga 1600
 aaccatttagc attgcagca ggtttcatat tctttctaag atggaaaagta 1650
 ataaaaata tttgaaatgt aaaaaaaaaa aaaaaa 1685

(210) 370

(211) 111

(212) PRT

<213> Homo sapiens

<400> 370

Met	Ser	Leu	Leu	Pro	Arg	Arg	Ala	Pro	Pro	Val	Ser	Met	Arg	Leu
1				5					10					15
Leu	Ala	Ala	Ala	Leu	Leu	Leu	Leu	Leu	Ala	Leu	Tyr	Thr	Ala	
				20				25					30	
Arg	Val	Asp	Gly	Ser	Lys	Cys	Lys	Cys	Ser	Arg	Lys	Gly	Pro	Lys
				35				40					45	
Ile	Arg	Tyr	Ser	Asp	Val	Lys	Lys	Leu	Glu	Met	Lys	Pro	Lys	Tyr
				50				55					60	
Pro	His	Cys	Glu	Glu	Lys	Met	Val	Ile	Ile	Thr	Thr	Lys	Ser	Val
				65				70					75	
Ser	Arg	Tyr	Arg	Gly	Gln	Glu	His	Cys	Leu	His	Pro	Lys	Leu	Gln
				80				85					90	
Ser	Thr	Lys	Arg	Phe	Ile	Lys	Trp	Tyr	Asn	Ala	Trp	Asn	Glu	Lys
				95				100					105	
Arg	Arg	Val	Tyr	Glu	Glu									
				110										

<210> 371

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 371

ccagcgacata cccatgtccc tg 22

<210> 372

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 372

cccccaactgg tttagagttt tccc 24

<210> 373

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 373

ctcaggtcag catgaggctc ctggcgcccg ctgctcctgc tgcg 45

<210> 374

<211> 3113

<212> DNA

<213> Homo sapiens

<400> 374

gcgccaggga ctgctatgga ctcccttggt gttcaccccg gtctggctca 50
tgctaaactc caatgtccct ctgtggttaa ctgctcttgc catcaagttc 100
accctcattg acagccaagc acagtatcca gttgtcaaca caaattatgg 150
caaaatccgg ggctaagaa caccgttacc caatgagatc ttgggtccag 200
tggagagcta cttaggggtc ccttatgctt cacccccacc tggagagagg 250
cgggttcagc cccagaacc ccgtccctcc tggactggca ccgaaaatcc 300
tactcagttt gctgctgtgt gcccccagca ccgggatgag agatccctac 350
tgcctgacat gctgcccatc tgggttaccg ccaattctga taatttgatg 400
acctatgttc aagatcaaaa tgaagactgc cttactttaa acatctacgt 450
gccacgggaa gatggagcca acacaaagaa aaacgcagat gatataacga 500
gtaatgaccc tgggtgaagc gaagatattc atgacacgaa cagtgaagaag 550
cccgctcatgg ctatatacca tgggggatct tacatggagg gcaccggcaa 600
catgattgac ggcagcattt tggcaagcta cggaaaagtc atcgtgatca 650
ccattcaacta ccgtctggga atactagggc ttttaagtac cggtgacccag 700
gcacaaaaag gcaactatgg gctccctggat cagattcaag cactgggggtg 750
gattgaggag aatgtgggag ccttcggcgg ggaccccaag agagtgaaca 800
ctcttggctc gggggctggg gctccctgtg tcagcctgtt gaacctgtcc 850
cactactcag aaggctctct ccagaaggcc atcattcaga gcggcacccg 900
ccgttcacgc tgggcagtga actaccagcc ggccaagtac actcggatat 950
tggcagacaa ggtcggctgc aacatgctgg acaccacgga catggtagaa 1000
tgcctgggga acaagaacta caaggagctc atccagcaga ccacacccc 1050
ggcacctac cacatagctt tggggccggc gatcgaaggc gaagtccatc 1100
cagacgaccc ccagatcctg atggagcaag gcgagttcct caactacgac 1150
atcatgctgg gctcaacca aggggaaggc ctgaagttcg tggacggcat 1200

cgtaggataac gaggacgggtg tgaagcccaa cgactttgac ttctccgtgt 1250
ccaacttctg ggacaacott tacggctacc ctgaagggaag agacactttg 1300
cgggagacta tcaagtctcat gtacacagac tgggccgata aggaaaaccc 1350
ggagacgggg cggaaaaccc tgggtggctct ctttactgac caccagtggg 1400
tggcccccgc cgtggccgcg gaactgcacg cgcagtaagg ctcccccaac 1450
taattctatg cttctatcca tcactgcaca agcgaaatga agcccagctg 1500
ggcagattcg gcccatgggtg atgaggtccc ctatgtcttc ggcattccca 1550
tgatcggctc caccagagctc ttcagttgta acttttccaa gaacgacgtc 1600
atgtccagcg ccgtggctcat gaactactgg acgaacttcg ccaaaaactgg 1650
tgatccaaat caaccagttc ctccaggata caagttcatt cacacaaaaa 1700
ccaacggctt tgaagaagtg gcttggctca agtataatcc caaagaccag 1750
ctctatctgc atattggctt gaaacccaga gtgagagatc actacccggc 1800
aacgaaagtg gctttctggg ttgaaactcg tcttcatttg cacaaactga 1850
acgagatatt ccagtatgtc ccaaccaacca caaaggcttc cccaccagac 1900
atgacatcat ttcctatgg caccgggga tctcccgcca agatatggcc 1950
aaccaacaaa cggccagcaa tcactcctgc caacaatccc aaacactcta 2000
aggaccccca caaaaacggg cctgaggaca caactgtctt cattgaaac 2050
aaacgagatt attccacga attaagtgtc accattggcg tggggggctc 2100
gtcctcttc ctcaacatct tagcttttgc gggcctgtac tacaaaaagg 2150
acaagajggc ccattgagaat cacaggcgcc ccagtcccca gagaaacacc 2200
acaaatgata tggctcacat ccagaacgaa gagatcatgt ctctgcagat 2250
gaagcagctg gaacaagatc acgagtgtga gtcgctgag gcacaagaca 2300
cactgaggct cactgcctcg ccagaactaca cctccacgtc ggcccggctg 2350
ccagatgaca tcccacttat gacgcacaa accatcacca tgattccaaa 2400
cacactgacg gggatgcagc ctttgacac ctttaacacc ttcagtggag 2450
gacaaaacag tacaaattta ccccacggac attccaccac tagagtatag 2500
ctttgcctta tttcccttc tatccctctg cctacccgc tcagcaacat 2550
agaagaggga aggaaagaga gaaggaaaga gagagagaaa gaaagtctcc 2600
agaccaggaa tgtttttgtc ccactgactt aagacaaaaa tgcaaaaagg 2650

cagtcacccc atcccggcag acccttatcg ttggtgtttt ccagtattac 2700
 aagatcaact tctgacctg tgaaatgtga gaagtacaca tttctgttaa 2750
 aataactgct ttaagactc taccactcca atcaatgttt agtgtgatag 2800
 gacatcacca ttccaaggcc cggggtgttt ccaacgtcat ggaagcagct 2850
 gacacttctg aaactcagcc aaggacactt gatatttttt aattacaatg 2900
 gaagtttaaa catttccttc tctgcacac aatggatggc tctccttaag 2950
 tgaagaaaga gtcaatgaga ttttgcccag cacatggagc tgtaatccag 3000
 agagaaggaa acgtagaaat ttattattaa aagaatggac tctgcagcga 3050
 aatctgtacg gttctgtgca aagaggtgtt ttgcacagct gaactatatt 31 0
 taagagaactt tgt 3113

#211: 375
 #211: 316
 #212: PRT
 #213: Homo sapiens

#401: 375
 Met Leu Asn Ser Asn Val Leu Leu Trp Leu Thr Ala Leu Ala Ile
 1 5 10 15
 Lys Phe Thr Leu Ile Asp Ser Gln Ala Gln Tyr Pro Val Val Asn
 20 25 30
 Thr Asn Tyr Gly Lys Ile Arg Gly Leu Arg Thr Pro Leu Pro Asn
 35 40 45
 Glu Ile Leu Gly Pro Val Glu Gln Tyr Leu Gly Val Pro Tyr Ala
 50 55 60
 Ser Pro Pro Thr Gly Glu Arg Arg Phe Gln Pro Pro Glu Pro Pro
 65 70 75
 Ser Ser Trp Thr Gly Ile Arg Asn Thr Thr Gln Phe Ala Ala Val
 80 85 90
 Cys Pro Gln His Leu Asp Glu Arg Ser Leu Leu His Asp Met Leu
 95 100 105
 Pro Ile Trp Phe Thr Ala Asn Leu Asp Thr Leu Met Thr Tyr Val
 110 115 118
 Gln Asp Gln Asn Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Val Pro
 125 130 135
 Thr Glu Asp Gly Ala Asn Thr Lys Lys Asn Ala Asp Asp Ile Thr
 140 145 150

Ser	Asn	Asp	Arg	Gly	Glu	Asp	Glu	Asp	Ile	His	Asp	Gln	Asn	Ser	
				151					160					165	
Lys	Lys	Pro	Val	Met	Val	Tyr	Ile	His	Gly	Gly	Ser	Tyr	Met	Gln	
				170					175					180	
Gly	Thr	Gly	Asn	Met	Ile	Asp	Gly	Ser	Ile	Leu	Ala	Ser	Tyr	Gly	
				185					190					195	
Asn	Val	Ile	Val	Ile	Thr	Ile	Asn	Tyr	Arg	Leu	Gly	Ile	Leu	Gly	
				200					205					210	
Phe	Leu	Ser	Thr	Gly	Asp	Gln	Ala	Ala	Lys	Gly	Asn	Tyr	Gly	Leu	
				215					220					225	
Leu	Asp	Gln	Ile	Gln	Ala	Leu	Arg	Trp	Ile	Gln	Glu	Asn	Val	Gly	
				230					235					240	
Ala	Phe	Gly	Gly	Asp	Pro	Lys	Arg	Val	Thr	Ile	Phe	Gly	Ser	Gly	
				245					250					255	
Ala	Gly	Ala	Ser	Cys	Val	Ser	Leu	Leu	Thr	Leu	Ser	His	Tyr	Ser	
				260					265					270	
Glu	Gly	Leu	Phe	Gln	Lys	Ala	Ile	Ile	Gln	Ser	Gly	Thr	Ala	Leu	
				275					280					285	
Ser	Ser	Trp	Ala	Val	Asn	Tyr	Gln	Pro	Ala	Lys	Tyr	Thr	Arg	Ile	
				290					295					300	
Leu	Ala	Asp	Lys	Val	Gly	Cys	Asn	Met	Leu	Asp	Thr	Thr	Asp	Met	
				305					310					315	
Val	Gln	Cys	Leu	Arg	Asn	Lys	Asn	Tyr	Lys	Gln	Leu	Ile	Gln	Gln	
				320					325					330	
Thr	Ile	Thr	Pro	Ala	Thr	Tyr	His	Ile	Ala	Phe	Gly	Pro	Val	Ile	
				335					340					345	
Asp	Gly	Asp	Val	Ile	Pro	Asp	Asp	Pro	Gln	Ile	Leu	Met	Glu	Gln	
				350					355					360	
Gly	Glu	Phe	Leu	Asn	Tyr	Asp	Ile	Met	Leu	Gly	Val	Asn	Gln	Gly	
				365					370					375	
Glu	Gly	Leu	Lys	Phe	Val	Asp	Gly	Ile	Val	Asp	Asn	Glu	Asp	Gly	
				380					385					390	
Val	Thr	Pro	Asn	Asp	Phe	Asp	Phe	Ser	Val	Ser	Asn	Phe	Val	Asp	
				395					400					405	
Asn	Leu	Tyr	Gly	Tyr	Pro	Glu	Gly	Lys	Asp	Thr	Leu	Arg	Glu	Thr	
				410					415					420	
Ile	Lys	Phe	Met	Tyr	Thr	Asp	Trp	Ala	Asp	Lys	Glu	Asn	Pro	Glu	
				425					430					435	

Thr Arg Arg Lys	Thr Leu Val Ala Leu	Phe Thr Asp His	Gln Trp	
440		441		450
Val Ala Pro Ala	Val Ala Ala Asp Leu	His Ala Gln Tyr	Gly Ser	
455		460		465
Pro Thr Tyr Phe	Tyr Ala Phe Tyr His	His Cys Gln Ser	Glu Met	
470		475		480
Lys Pro Ser Trp	Ala Asp Ser Ala His	Gly Asp Glu Val	Pro Tyr	
485		490		495
Val Phe Gly Ile	Pro Met Ile Gly Pro	Thr Glu Leu Phe	Ser Cys	
500		505		510
Asn Phe Ser Lys	Asn Asp Val Met Leu	Ser Ala Val Val	Met Thr	
515		520		525
Tyr Trp Thr Asn	Phe Ala Lys Thr Gly	Asp Pro Asn Gln	Pro Val	
530		535		540
Pro Gln Asp Thr	Lys Phe Ile His Thr	Lys Pro Asn Arg	Phe Glu	
545		550		555
Glu Val Ala Trp	Ser Lys Tyr Asn Pro	Lys Asp Gln Leu	Tyr Leu	
560		565		570
His Ile Gly Leu	Lys Pro Arg Val Arg	Asp His Tyr Arg	Ala Thr	
575		580		585
Lys Val Ala Phe	Trp Leu Glu Leu Val	Pro His Leu His	Asn Leu	
590		595		600
Asn Glu Ile Phe	Gln Tyr Val Ser Thr	Thr Thr Lys Val	Pro Pro	
605		610		615
Pro Asp Met Thr	Ser Phe Pro Tyr Gly	Thr Arg Arg Ser	Pro Ala	
620		625		630
Lys Ile Trp Pro	Thr Thr Lys Arg Pro	Ala Ile Thr Pro	Ala Asn	
635		640		645
Asn Pro Lys His	Ser Lys Asp Pro His	Lys Thr Gly Pro	Glu Asp	
650		655		660
Thr Thr Val Leu	Ile Glu Thr Lys Arg	Asp Tyr Ser Thr	Glu Leu	
665		670		675
Ser Val Thr Ile	Ala Val Gly Ala Ser	Leu Leu Phe Leu	Asn Ile	
680		685		690
Leu Ala Phe Ala	Ala Leu Tyr Tyr Lys	Lys Asp Lys Arg	Arg His	
695		700		705
Glu Thr His Arg	Arg Pro Ser Pro Gln	Arg Asn Thr Thr	Asn Asp	
710		715		720

Ile Ala His Ile Gln Asn Glu Glu Ile Met Ser Leu Gln Met Lys
725 730 735

Gln Leu Glu His Asp His Glu Cys Glu Ser Leu Gln Ala His Asp
740 745 750

Thr Leu Arg Leu Thr Cys Pro Pro Asp Tyr Thr Leu Thr Leu Arg
755 760 765

Arg Ser Pro Asp Asp Ile Pro Leu Met Thr Pro Asn Thr Ile Thr
775 780

Met Ile Pro Asn Thr Leu Thr Gly Met Gln Pro Leu His Thr Phe
785 790 795

Asn Thr Phe Ser Gly Gly Gln Asn Ser Thr Asn Leu Pro His Gly
800 805 810

His Ser Thr Thr Arg Val
815

<110> 376
<111> 15
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 376
gggaagctac ggaaaagtcg tcgtg 25

<110> 377
<111> 15
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 377
gaacccagcag ccaaaaagatg gtcac 25

<110> 378
<111> 47
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 378
gtacacgtgta ccaggcagca aaaggcaact atgggctcct ggatcag 47

<110> 379
<111> 1461
<112> DNA

<213> Homo sapiens

<400> 379

gggaagatg gggggagctc tgggacccct tgggtcgtgg cagcagtggc 50
ggcjatgttc gtcgggtcgg gatgggtcca ggcgtttact cctctctctc 100
ttgtttggggc ctggggcagg ggcacagcaa gtccgggggg gtcaaacgtt 150
cgagtacttg aaacggggagc actcgtctgc gaagccctac cagggtgttg 200
gcacaggcag tccctcactg tgggaatctga tgggcaatgc catggtgatg 250
accaggtata tccgccttac ccagatattg caaagttaac aggytgccct 300
gtggaaacgg gtgcacgttc tctgagaga ctgggagttg caggcgcact 350
tcataatcca tggacaggga aagaagaatc tgcctgggga tggcttgcca 400
atctggtaca caaaggatcg gatgcagcca gggcctgtgt ttggaacac 450
ggacaaattt gtggggctgg gagtatttgt agacacctac cccaatgagg 500
agaagcagca agagcgggta ttccctaca tctcagccat ggtgaacaa 550
ggctccctca gctatgacca tgagcgggat gggcggccta cagagctggg 600
aggctgcaca gccattgtcc gcaatcttca ttaagacacc tccctggtga 650
ttcgtactgt caagaggcat ttgacgataa tgatggatat tgatggcaag 700
catgagtggg gggactgcac tgaagtgcac ggagtcggcc tgcctcgagg 750
ctaactcttc ggcacccctc ccatcactgg gcatcttca gataatcatg 800
atgtcatttc cttgaagttg tttgaactga cagtggagag aaccccagaa 850
gaggaaaagg tccatcgaga tctgtctctg cctcagtggt acaatatgaa 900
gttgccctgag atjacagctc cactgcggcc cctgagtggc ctggccctct 950
tcccatcgt cttttctctc ctgggtgttt ctgtatttgc catagtcatt 1000
ggtatcatac tctacaacaa atggcaggaa cagagccgaa agcgtttcta 1050
ctgagccctc ctgctgcac cacttttctg actgtcaccc atgaggtatg 1100
gaaggagcag gcactggcct gagcatgcag cctggagagt gttcttgcct 1150
ctagcagctg gttggggaat atattctgtc actggagttt tgaatgcagg 1200
gaccccgcat tcccatggtt gtgcctgggg acatctaac ctggctctggg 1250
aagccaccca ccccaggcca atgctgctgt gatgtgcctc tccctgcagt 1300
ccttccatgt gggagcagag gtgtgaagag aatttaactg gttgtgatgc 1350

aaaaatcaca gaacagaatt tcatagccca ggctgccgtg ttgtttgact 1400
 cagaaggccc ttctaactca gttttgaatc caccagaat taaaaactgg 1450
 taacaccaca ggctttctga ccattccatt gttgggtttt gcatttgacc 1500
 caacctcttg cctacctgag gagctttctt tggaaaaccg gatggaaaact 1550
 tcttccctgc cttaccttcc tttaactcca ttcattgtcc tctctgtgtg 1600
 caacctgagc tgggaaaagg atttggatgc ctctctgttg gggccctgggg 1650
 ctgcagaaac cactgtggtt tcaatgggct tcattagggt gccctaggga 1700
 gatggcttcc tgccttggat cactgttccc tagcatgggt ctgggtctca 1750
 ttggcatgtc catggccttc ccaatcaagt ctcttcagga cctcagtcaa 1800
 gtttggctaa aggttgggtg aaaaatcaag agaagcctgg aagacatcat 1850
 ggatgccatg gattagctgt gcaactgacc agctccaggt ttgatcaaac 1900
 caaaagcaac atttgtcatg tggctcgacc atgtggagat gttctcggac 1950
 ttgatagagc ctgcttagct gcctgttttg tagttaagat tcttggaatc 2000
 caactttgag tgcagaaagt gtaagggaag tttcttctta cacttggggc 2050
 ttgatattg ccagagagag aaatttggct tttttttctt caatggacaa 2100
 gagacagttg ctgttctcat gttccaaagt cgagagcaac agacctcat 2150
 catctgtgac tgggaagagt cactgtcatt gaggagcaca gctcgagtgc 2200
 tggctctctg caacctttat tccactgctt tatttgacaa ggggttacat 2250
 gctctcacc ttactgcctt gggattaaat cagttacagg ccagagtctc 2300
 ctgggagggc ctggaaactc gactcctctt atgaacctct gtagcctaaa 2350
 tgaattctt aaaaatcacc atggaaccaa aaaaaaaaaa aaaaagggtg 2400
 tccagpactc tagagtcgac ctgcagttag gataacaggg taataagctt 2450
 ggccgcatg g 2461

<210> 360
 <211> 348
 <212> PRT
 <213> Homo sapiens

<400> 360
 Met Ala Ala Thr Leu Gly Pro Leu Gly Ser Trp Gln Gln Trp Arg
 1 5 10 15
 Arg Cys Leu Ser Ala Arg Asp Gly Ser Arg Met Leu Leu Leu Leu
 20 25 30

Leu	Leu	Leu	Gly	Ser	Gly	Gln	Gly	Pro	Gln	Gln	Val	Gly	Ala	Gly	
				35					40					45	
Gln	Thr	Phe	Glu	Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro	
				50					55					60	
Tyr	Gln	Gly	Val	Gly	Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met	
				65					70					75	
Gly	Asn	Ala	Met	Val	Met	Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp	
				80					85					90	
Met	Gln	Ser	Lys	Gln	Gly	Ala	Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe	
				95					100					105	
Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val	His	Phe	Lys	Ile	His	Gly	Gln	
				110					115					120	
Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly	Leu	Ala	Ile	Trp	Tyr	Thr	
				125					130					135	
Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe	Gly	Asn	Met	Asp	Lys	
				140					145					150	
Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr	Pro	Asn	Glu	Glu	
				155					160					165	
Lys	Gln	Gln	Glu	Arg	Val	Phe	Pro	Tyr	Ile	Ser	Ala	Met	Val	Asn	
				170					175					180	
Asn	Gly	Ser	Leu	Ser	Tyr	Asp	His	Glu	Arg	Asp	Gly	Arg	Pro	Thr	
				185					190					195	
Glu	Leu	Gly	Gly	Cys	Thr	Ala	Ile	Val	Arg	Asn	Leu	His	Tyr	Asp	
				200					205					210	
Thr	Phe	Leu	Val	Ile	Arg	Tyr	Val	Lys	Arg	His	Leu	Thr	Ile	Met	
				215					220					225	
Met	Asp	Ile	Asp	Gly	Lys	His	Glu	Trp	Arg	Asp	Cys	Ile	Glu	Val	
				230					235					240	
Pro	Gly	Val	Arg	Leu	Pro	Arg	Gly	Tyr	Tyr	Phe	Gly	Thr	Ser	Ser	
				245					250					255	
Ile	Thr	Gly	Asp	Leu	Ser	Asp	Asn	His	Asp	Val	Ile	Ser	Leu	Lys	
				260					265					270	
Leu	Phe	Glu	Leu	Thr	Val	Glu	Arg	Thr	Pro	Glu	Glu	Glu	Lys	Leu	
				275					280					285	
His	Arg	Asp	Val	Phe	Leu	Pro	Ser	Val	Asp	Asn	Met	Lys	Leu	Pro	
				290					295					300	
Glu	Met	Thr	Ala	Pro	Leu	Pro	Pro	Leu	Ser	Gly	Leu	Ala	Leu	Phe	
				305					310					315	

Leu Ile Val Phe Phe Ser Leu Val Phe Ser Val Phe Ala Ile Val
320 325 330

Ile Gly Ile Ile Leu Tyr Asn Lys Trp Gln Glu Gln Ser Arg Lys
335 340 345

Arg Phe Tyr

<210> 341

<211> 21

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 341

actgggttag tggcagcagt gg 22

<210> 342

<211> 24

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 342

actctctcag gctgcattgt cagg 24

<210> 343

<211> 45

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<400> 343

attcctctctt cgagctacttg aaacggggagc actcgtctgc gaagc 45

<210> 344

<211> 3160

<212> DNA

<213> Homo sapiens

<400> 344

caggagcgggg cgggcagcga cggagctggg gcgggcctgg gaccatgggc 50

gtgagtgcaa tctacggatc agtctctgat ggtgggttgt taacctcagt 100

ggggactcca agatttcctt gaagaaaatc agttgtcttc attcaagaat 150

tggggctctgg ctcagaatcc ctgcagctgg tgaaaatctg tttctagaa 200

gaggtttaat taatgootgo agtctgacat gttcccgatt tgaggtgaaa 250
 ccctgaagag aaaatagaat accttaatat gcttttcgcg aacccgtttct 300
 tgetgctget ggccctggct gogctgctgg cctttgtgag cctcagcctg 350
 cagttcttcc acctgatccc ggtgtcgact cctaagaatg gaatgagtag 400
 caagagtoga aagagaatca tgcccgaacc tgtgacggag cccctgtga 450
 cagaacccgt ttatgaaget cttttgtact gcaacatccc cagtgtggcc 500
 gagcgagca tgyaaggtea tgccccgcat ctttttaago tggcttcagt 550
 goatgtgttc attcgccacg gajacaggtt cccactgtat gtcattccca 600
 aaacaaagcg accagaaatt gactgcactc tgggtggctaa caggaaaacc 650
 taccacccaa aactggaago tttcattagt cacatgtcaa aaggatccgg 700
 agctctcttc gaaagccctt tgaactcctt gctctcttac ccaaatcacc 750
 cattgtgtga gatgggagag cccacacaga caggagttgt gcagcatttg 800
 cagaacggtc agctgctgag ggatatctat cttaaagaaa acaaacctct 850
 gcccaatgat tggcttgcag accagctcta tttagagacc actgggaaaa 900
 gccggacccct acaaatgtgg ctggccttgc tttatggctt cctccagat 950
 tctgactgga agaagattta tttcagggac cagccaagtg cgtgtttctg 1000
 ctctggaago tctattgccc cggtaagaaa ccagtatctg gaaaaggagc 1050
 aggttcgtca gtacctccta cgtctgaaaa acagccagct ggagaagacc 1100
 taaggggaga tggccaagat cgtggatgtc cccaccaagc agcttagagc 1150
 tgcacacccc atagactcca tgccttgcca cttctggcac aatgtcagct 1200
 tccctgttac cagaaatggc tgtgttgaca tggagcactt caaggttaatt 1250
 aagaaccatc agatcgagga tgaaaggga agacgggaga agaaattgta 1300
 cctcgggtat cctccctgg gtcgccaccc catcctgaac caaaccatcg 1350
 gccggatgca gctgcccacc gagggcagga aagaagagct ctttgccctc 1400
 tactctgctc atgatgtcac tctgtcacca gttctcagtg ccttggggct 1450
 ttcagaagcc aggttcccaa ggtttgcagc caggttgatc tttgagcttt 1500
 ggcaagacag agaaaagccc agtgaacatt ccgtccggat tctttacaat 1550
 gggtcgatg tcacattcca cactctttc tgcacagac accacaagcg 1600
 ttctcccaag cccatgtgac cgttgaaaa cttgggtccg tttgtgaaaa 1650

gggacatggt tgtagccctg ggtggcagtg gtacaaatta ttatgatgca 1700
tgtcacaggg aaggattcta aaaggtatgc agtacagcag tatagaatcc 1750
atgccaatac agagcatagg gaaaggtcca cttctagttt tgtctgttac 1800
taagggtaga agattattgc tttttaaagg ctaaatattg tttgtgggaa 1850
ccacagatgg ttgggggtga acagtaagca cattgtcgca atgtggtaag 1900
tgaattggtt ggtacaaaat ggcagttcca cagaggcata gaaggtactt 1950
tatcatagcc agacttcgct tagaatgcca gaataatata gttcaagacc 2000
tgaagtgcgc aatccaagtt tgcactcttc tggcctgcgc catgttacta 2050
tgtgatggaa ccagcacacc tcaaccaaaa tttttttaat cttagacatt 2100
ttacacctgt ccttggttaag aatttcttga agtgatttat ctaaaaataa 2150
ggttggcaaa cttttctgtt aaagggccag attgtaaata ttccagactg 2200
tgtggaccaa aaggccacat acagctctctg tcataactac tcaactctgt 2250
ttctgaagca ggaaagccac cacagacagt acataaagga atatgtgtag 2300
ctgggttccc aggcacagca aaacagatgg tgaccagaat tggcccttgg 2350
gtgtgtgttt gctgacccct catctaaaaa ataggctata ctacaattgc 2400
acttccagca ctttgagaac gagttgaata ccaagaatta ttcaatgggt 2450
cctccagtaa cttctgttag aaacacagaa ttgggtctgt atctgacact 2500
agaacaaaaa ttgagggtaa ataaacattg aattagaatg aatcatagaa 2550
aatgatttag aagaatactt gatgtttatg atgattgtgg tacaagatag 2600
ttttaagtat gttctaaata cttgtctgct gtagtctatt tggctgtatat 2650
gctgaaattt ttgtatgcca tttagtattt ttatagttca ggaaaaatatt 2700
ttctaagacc agtttttagat gactcttatt cctgtagtta tattcaattt 2750
gctgtacctg cttgggtgggt agaaggagga tagaagatga attcaggcac 2800
ttttttccaa taaaaactaa catggctcat tcccttcgac aagctgtaga 2850
actggattca tttttaaaac atttttcaca gtttcaaatg gttaaattctg 2900
attgattttt aaatgcgttt ttggaagaac ttgtctatta ggtagtctac 2950
agatctttat aaggtgtctt atatattaga agcaattata attacatctg 3000
tgattttctg actaatgggt ctaattcaga gaaatggaaa gtgaaagtga 3050

gattctctgt tgcacagggc attccaactt tttctctttg tttttgtcca 3100

gtgttgcaat tgaatatgtc tgttctata aataaatttt ttaagaataa 3150

<210> 325

<211> 420

<212> PBT

<213> Homo sapiens

<400> 325

Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala
1 5 10 15

Leu Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile
20 25 30

Pro Val Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys
35 40 45

Arg Ile Met Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro
50 55 60

Val Tyr Glu Ala Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu
65 70 75

Arg Ser Met Glu Gly His Ala Pro His His Phe Lys Leu Val Ser
80 85 90

Val His Val Phe Ile Arg His Gly Asp Arg Tyr Pro Leu Tyr Val
95 100 105

Ile Pro Lys Thr Lys Arg Pro Glu Ile Asp Cys Thr Leu Val Ala
110 115 120

Asn Arg Lys Pro Tyr His Pro Lys Leu Glu Ala Phe Ile Ser His
125 130 135

Met Ser Lys Gly Ser Gly Ala Ser Phe Glu Ser Pro Leu Asn Ser
140 145 150

Leu Pro Leu Tyr Pro Asn His Pro Leu Cys Glu Met Gly Glu Leu
155 160 165

Thr Gln Thr Gly Val Val Gln His Leu Gln Asn Gly Gln Leu Leu
170 175 180

Arg Asp Ile Tyr Leu Lys Lys His Lys Leu Leu Pro Asn Asp Trp
185 190 195

Ser Ala Asp Gln Leu Tyr Leu Glu Thr Thr Gly Lys Ser Arg Thr
200 205 210

Leu Gln Ser Gly Leu Ala Leu Leu Tyr Gly Phe Leu Pro Asp Phe
215 220 225

Asp Trp Lys Lys Ile Tyr Phe Arg His Gln Pro Ser Ala Leu Phe
230 235 240

Cys Ser Gly Ser	Cys Tyr Cys Pro Val	Arg Asn Gln Tyr Leu Glu	245	250	255
Lys Glu Gln Arg	Arg Gln Tyr Leu Leu	Arg Leu Lys Asn Ser Gln	260	265	270
Leu Glu Lys Thr	Tyr Gly Glu Met Ala	Lys Ile Val Asp Val Pro	275	280	285
Thr Lys Gln Leu	Arg Ala Ala Asn Pro	Ile Asp Ser Met Leu Cys	290	295	300
His Phe Cys His	Asn Val Ser Phe Pro	Cys Thr Arg Asn Gly Cys	305	310	315
Val Asp Met Glu	His Phe Lys Val Ile	Lys Thr His Gln Ile Glu	320	325	330
Asp Glu Arg Glu	Arg Arg Glu Lys Lys	Leu Tyr Phe Gly Tyr Ser	335	340	345
Leu Leu Gly Ala	His Pro Ile Leu Asn	Gln Thr Ile Gly Arg Met	350	355	360
Gln Arg Ala Thr	Glu Gly Arg Lys Glu	Glu Leu Phe Ala Leu Tyr	365	370	375
Ser Ala His Asp	Val Thr Leu Ser Pro	Val Leu Ser Ala Leu Gly	380	385	390
Leu Ser Glu Ala	Arg Phe Pro Arg Phe	Ala Ala Arg Leu Ile Phe	395	400	405
Glu Leu Trp Gln	Asp Arg Glu Lys Pro	Ser Glu His Ser Val Arg	410	415	420
Ile Leu Tyr Asn	Gly Val Asp Val Thr	Phe His Thr Ser Phe Cys	425	430	435
Gln Asp His His	Lys Arg Ser Pro Lys	Pro Met Cys Pro Leu Glu	440	445	450
Asn Leu Val Arg	Phe Val Lys Arg Asp	Met Phe Val Ala Leu Gly	455	460	465
Gly Ser Gly Thr	Asn Tyr Tyr Asp Ala	Cys His Arg Glu Gly Phe	470	475	480

(210) 386

(211) 24

(212) DNA

(213) Artificial Sequence

(220)

(223) Synthetic oligonucleotide probe

4400 - 386

ccaagcagct tagagctcca gacc 24

4410 - 387

4411 - 26

4412 - DNA

4413 - Artificial Sequence

4420 -

4423 - Synthetic oligonucleotide probe

4430 - 387

ctccctatgc ctgtattgg catgg 25

4440 - 388

4441 - 37

4442 - DNA

4443 - Artificial Sequence

4450 -

4453 - Synthetic oligonucleotide probe

4460 - 388

gcacattctg ccacaatgtc agctttccct gtaccagaaa tggctgtgtt 50

4470 - 389

4471 - 3812

4472 - DNA

4473 - Homo sapiens

4480 - 389

aaaaaagctc actaaagttc ctattagagc gaatacggta gatttccatc 50

cccttttgaa gaacagtact gggagctat ttaagagata aaaacgaaat 100

atcccttctg ggagttcaag attgtgcagt aattgggtag gactctgagc 150

gcctgtgttc accaatcggg gagagaaaag cggagatcct gctcgccttg 200

ccagcgccctg aagcacaaa gacatagcta ggaatgaacc atccctggga 250

gtatgttgaa acaacggagg agctctgact tcccaactgt cccattctat 300

ggcagaagga actgctcctg acttcagtgg ttaagggcag aattgaaaat 350

aattctggag gaagataaga atgattcctg ccggaactgca ccgggactac 400

aaagggcttg cctgtctggg aatcctcctg gggactctgt gggagacggg 450

atgcacccag atacgtatc cagttccgga agagctggag aaaggctcta 500

gggtggggga catctccagg gaactggggc tggagccccc ggagctcgcg 550

gagcggggag tcgcacatc cccagaggt aggaacgcag ttttcgcctt 600

gaatccggcg agcggcagct tggtcacggc gggcaggata gacggggagg 650

agctctgtat ggggggcata aagtggtcaat taaatctaga cattctgatg 750
gaggataaaag tgaataatata tggagtagaa gtagaagtaa gggacattaa 750
cgacaatgog ccttactttc gtgaaagtga attagaaata aaaactagt 800
aaaatgcagc cactgagatg cggttccctc taccacagc ctgggatacg 850
gatatcggga agaatctctc gcagagctac gagctcagcc cgaacactca 900
cttctccctc atcgtgcaaa atggagccga cggtagtaag taccocgaat 950
tgggtgtgaa acgggccttg gacggcgaag aaaaggctgc tcaacacctg 1000
gtccttacgg cctccgacgg gggcgacccg gtgcgacag gcacggcgcg 1050
caccggctg atggctcgg atgggaacga caacgcacca gctttcgtc 1100
agcccgagta ccggcgagc gttccggaga atctggcctt gggcacgag 1150
ctgcttgtag tcaacgctac cgaacctgac gaaggagtca atcgcggaat 1200
gaggtattcc ttcgggtatg tggacgacaa ggccggccaa gttttcaaac 1250
tagattgtaa ttcagggaca atatcaacaa taggggagtt ggacacgag 1300
gagtcaggat tctacagat ggaagtgc aa gcaatggata atgcaggata 1350
ttctgcgga gccaaagtcc tgatcactgt cctggacgtg aacgacaatg 1400
cccagaagt ggtccctacc tctctcgcca gctcgggtcc cgaatactct 1450
cccagaggga cattaattgc ccttttaaat gtaaatgacc aagattctga 1500
ggaaaaaggga caggtgatct gtttcaccca aggaatctg ccttttaaat 1550
tagaaaaatc ttaaggaaat tactatagtt tagtcacaga catagtctg 1600
gatagggaac aggttcctag ctacaacata acagtgaacg caactgaacg 1650
gggaaccccg cccctatcca cggaaaactca tatctcgtg aactgggag 1700
acaccaacga caacccgcgc gttctccctc aggcctccta ttcggcttat 1750
atcccagaga acaatcccag agggagtttc ctcgtctctg tgacggcca 1800
cgaccccgac tgtgaagaga acgcacagat cacttattcc ctggctgaga 1850
acacaccca aggggcaagc ctatcgtcct acgtgtccat caactccgac 1900
actggggctac tgtatgcgct gagctccctc gactacgagc agttccgaga 1950
cttgcaagtg aaagtgatgg ccggggacaa cgggcacccg cccctcagca 2000
gcaacgtgtc gttgagcctg ttcgtgctgg accagaaacga caatgcgcgc 2050
gagatcctgt accccgcctt ccccacggac ggttccactg gctgggagct 2100

ggtccccgc tccgcagagc ccggctacct ggtgaccaag gtgggtggcgg 2150
 cggacagaga ccccgccag aacgcctggc tgtcctaccg tctgctcaag 2200
 gccagcgagc cgggactctt ctgggtgggt ctgcacacgg ggcaggtgag 2250
 cacggcgga ggcctgctgg acagagagcc gctcaagcag agcctcgtag 2300
 tggcgtcca ggaccacggc cagccccctc tctccggcac tgtcacgctc 2350
 accgtggcgg tggccgacag catcccccaa gtccctggcgg accctggcag 2400
 cctcgactct ccagctaaat ctgaaacctc agacctcaat ctgtacctgg 2450
 tggtagcggg ggcgcgggct tccctggctct tccctggcctt cgtcatctct 2500
 ctgctggcgc tcaggctgag ggcctggcac aagtccagcc tggcgcaggg 2550
 tcaggcaggg ggcctgcacg gagcgccggc gtccgacctt gtggcgctgg 2600
 aocgggtgca ggccttctct cagacctatt cccacgaggt tccccccacc 2650
 aocgaactgc ggaagagtca cctgatcttc ccccagccca actatgcaga 2700
 catgctgctc agccaggaga gctttgaaaa aagcgagccc cttttgctgt 2750
 cagctgattc ggtattttct aaagacagtc atgggttaat tgaggtgagt 2800
 ttatatcaaa tctctctctt tttttttttt aattgctctg tctcccaagg 2850
 tggagtgagc cggtaagatc atagctcaat ggggcctcaa actcctaggg 2900
 tcaagcaatt atccacctt tgcctccggc gtaacaggga ctacaggctg 2950
 aagccacctc ctgtctgctt atctatctat ctatctatct atctatctat 3000
 ctatctatct atctatctat taattttctg tacagacggg agtctcacgc 3050
 ctgtaattcc agtaactttg gaggcgcagg cgggtggatc acctgaggtt 3100
 gggagtttga gaccagctg accaaccatg agaaaacccg tctatactaa 3150
 aaaaatacaa aattagccgg gcgtggctgt gcatgtctgt aatccbagct 3200
 acttgggagg ctgagtcagg agaattgctt taacctggga ggtggaggtt 3250
 gcaatgagct gagattgtgc cattgcactc cagcctgggc aacaagagtg 3300
 aaactctatc tca 3313

#210: 390
 #211: 916
 #212: PET
 #213: Homo sapiens
 #400: 390

Met	Ile	Pro	Ala	Arg	Leu	His	Arg	Asp	Tyr	Lys	Gly	Leu	Val	Leu	
1				5					10					15	
Leu	Gly	Ile	Leu	Leu	Gly	Thr	Leu	Trp	Glu	Thr	Gly	Cys	Thr	Gln	
				20					25					30	
Ile	Arg	Tyr	Ser	Val	Pro	Glu	Glu	Leu	Glu	Lys	Gly	Ser	Arg	Val	
				35					40					45	
Gly	Asp	Ile	Ser	Arg	Asp	Leu	Gly	Leu	Glu	Pro	Arg	Glu	Leu	Ala	
				50					55					60	
Glu	Arg	Gly	Val	Arg	Ile	Ile	Pro	Arg	Gly	Arg	Thr	Gln	Leu	Phe	
				65					70					75	
Ala	Leu	Asn	Pro	Arg	Ser	Gly	Ser	Leu	Val	Thr	Ala	Gly	Arg	Ile	
				80					85					90	
Asp	Arg	Glu	Glu	Leu	Cys	Met	Gly	Ala	Ile	Lys	Cys	Gln	Leu	Asn	
				95					100					105	
Leu	Asp	Ile	Leu	Met	Glu	Asp	Lys	Val	Lys	Ile	Tyr	Gly	Val	Glu	
				110					115					120	
Val	Glu	Val	Arg	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Tyr	Phe	Arg	Glu	
				125					130					135	
Ser	Glu	Leu	Glu	Ile	Lys	Ile	Ser	Glu	Asn	Ala	Ala	Thr	Glu	Met	
				140					145					150	
Arg	Phe	Pro	Leu	Pro	His	Ala	Trp	Asp	Pro	Asp	Ile	Gly	Lys	Asn	
				155					160					165	
Ser	Leu	Gln	Ser	Tyr	Glu	Leu	Ser	Pro	Asn	Thr	His	Phe	Ser	Leu	
				170					175					180	
Ile	Val	Gln	Asn	Gly	Ala	Asp	Gly	Ser	Lys	Tyr	Pro	Glu	Leu	Val	
				185					190					195	
Leu	Lys	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Lys	Ala	Ala	His	His	Leu	
				200					205					210	
Val	Leu	Thr	Ala	Ser	Asp	Gly	Gly	Asp	Pro	Val	Arg	Thr	Gly	Thr	
				215					220					225	
Ala	Arg	Ile	Arg	Val	Met	Val	Leu	Asp	Ala	Asn	Asp	Asn	Ala	Pro	
				230					235					240	
Ala	Phe	Ala	Gln	Pro	Glu	Tyr	Arg	Ala	Ser	Val	Pro	Glu	Asn	Leu	
				245					250					255	
Ala	Leu	Gly	Thr	Gln	Leu	Leu	Val	Val	Asn	Ala	Thr	Asp	Pro	Asp	
				260					265					270	
Glu	Gly	Val	Asn	Ala	Glu	Val	Arg	Tyr	Ser	Phe	Arg	Tyr	Val	Asp	
				275					280					285	

Asp Lys Ala Ala	Gln Val Phe Lys Leu	Asp Cys Asn Ser Gly Thr	290	300
Ile Ser Thr Ile	Gly Glu Leu Asp His	Glu Glu Ser Gly Phe Tyr	305	315
Gln Met Glu Val	Gln Ala Met Asp Asn	Ala Gly Tyr Ser Ala Arg	320	330
Ala Lys Val Leu	Ile Thr Val Leu Asp	Val Asn Asp Asn Ala Pro	335	345
Glu Val Val Leu	Thr Ser Leu Ala Ser	Ser Val Pro Glu Asn Ser	350	360
Pro Arg Gly Thr	Leu Ile Ala Leu Leu	Asn Val Asn Asp Gln Asp	365	375
Ser Glu Glu Asn	Gly Gln Val Ile Cys	Phe Ile Gln Gly Asn Leu	380	390
Pro Phe Lys Leu	Glu Lys Ser Tyr Gly	Asn Tyr Tyr Ser Leu Val	395	405
Thr Asp Ile Val	Leu Asp Arg Glu Gln	Val Pro Ser Tyr Asn Ile	410	420
Thr Val Thr Ala	Thr Asp Arg Gly Thr	Pro Pro Leu Ser Thr Glu	425	435
Thr His Ile Ser	Leu Asn Val Ala Asp	Thr Asn Asp Asn Pro Pro	440	450
Val Phe Pro Gln	Ala Ser Tyr Ser Ala	Tyr Ile Pro Glu Asn Asn	455	465
Pro Arg Gly Val	Ser Leu Val Ser Val	Thr Ala His Asp Pro Asp	470	480
Cys Glu Glu Asn	Ala Gln Ile Thr Tyr	Ser Leu Ala Glu Asn Thr	485	495
Ile Gln Gly Ala	Ser Leu Ser Ser Tyr	Val Ser Ile Asn Ser Asp	500	510
Thr Gly Val Leu	Tyr Ala Leu Ser Ser	Phe Asp Tyr Glu Gln Phe	515	525
Arg Asp Leu Gln	Val Lys Val Met Ala	Arg Asp Asn Gly His Pro	530	540
Pro Leu Ser Ser	Asn Val Ser Leu Ser	Leu Phe Val Leu Asp Gln	545	555
Asn Asp Asn Ala	Pro Glu Ile Leu Tyr	Pro Ala Leu Pro Thr Asp	560	570

Gly Ser Thr Gly Val Glu Leu Ala Pro Arg Ser Ala Glu Pro Gly	575	580	585
Tyr Leu Val Thr Lys Val Val Ala Val Asp Arg Asp Ser Gly Gln	590	595	600
Asn Ala Trp Leu Ser Tyr Arg Leu Leu Lys Ala Ser Glu Pro Gly	605	610	615
Leu Phe Ser Val Gly Leu His Thr Gly Glu Val Arg Thr Ala Arg	620	625	630
Ala Leu Leu Asp Arg Asp Ala Leu Lys Gln Ser Leu Val Val Ala	635	640	645
Val Gln Asp His Gly Gln Pro Pro Leu Ser Ala Thr Val Thr Leu	650	655	660
Thr Val Ala Val Ala Asp Ser Ile Pro Gln Val Leu Ala Asp Leu	665	670	675
Gly Ser Leu Glu Ser Pro Ala Asn Ser Gln Thr Ser Asp Leu Thr	680	685	690
Leu Tyr Leu Val Val Ala Val Ala Ala Val Ser Cys Val Phe Leu	695	700	705
Ala Phe Val Ile Leu Leu Leu Ala Leu Arg Leu Arg Arg Trp His	710	715	720
Lys Ser Arg Leu Leu Gln Ala Ser Gly Gly Gly Leu Thr Gly Ala	725	730	735
Pro Ala Ser His Phe Val Gly Val Asp Gly Val Gln Ala Phe Leu	740	745	750
Gln Thr Tyr Ser His Glu Val Ser Leu Thr Thr Asp Ser Arg Lys	755	760	765
Ser His Leu Ile Phe Pro Gln Pro Asn Tyr Ala Asp Met Leu Val	770	775	780
Ser Gln Glu Ser Phe Glu Lys Ser Glu Pro Leu Leu Leu Ser Gly	785	790	795
Asp Ser Val Phe Ser Lys Asp Ser His Gly Leu Ile Glu Val Ser	800	805	810
Leu Tyr Gln Ile Phe Phe Leu Phe Phe Phe Asn Cys Ser Val Ser	815	820	825
Gln Ala Gly Val Gln Arg Tyr Asp His Ser Ser Leu Arg Pro Gln	830	835	840
Thr Pro Arg Leu Lys Gln Leu Ser His Leu Cys Leu Arg Cys Asn	845	850	855

Arg Asp Tyr Arg Cys Lys Pro Pro Thr Val Cys Leu Ser Ile Tyr
860 865 870

Leu Ser Ile Tyr Leu Ser Ile Tyr Leu Ser Ile Tyr Leu Leu Leu
875 880 885

Ser Cys Thr Asp Gly Ser Leu Thr Pro Val Ile Pro Val Leu Trp
890 895 900

Glu Ala Glu Ala Gly Gly Ser Pro Glu Val Gly Ser Leu Arg Pro
905 910 915

Ala

<310> 341

<311> 23

<312> DNA

<313> Artificial Sequence

<320>

<321> Synthetic oligonucleotide probe

<400> 341

tcctctctctg tgaacggccc cac 23

<310> 342

<311> 24

<312> DNA

<313> Artificial Sequence

<320>

<321> Synthetic oligonucleotide probe

<400> 342

ctcggggcgca ttgtgtttct ggtc 24

<310> 343

<311> 40

<312> DNA

<313> Artificial Sequence

<320>

<321> Synthetic oligonucleotide probe

<410> 343

cccacgtgtga aagagaacgc cccagatcca cttgttcacc 40

<310> 344

<311> 449

<312> DNA

<313> Homo sapiens

<410> 344

cccagctctc agtgcaggag gagaaggagg aggacagga ggtggagatt 50

cccagttaaa aggtccaga atcgtgtacc aggcagagaa ctgaagtact 100

aggggctctc ccaactgggtc cgaatcagta ggtgaccccg cccctggatt 151
 ctggaagacc tcaacatggg acgccccga cctcgtgggg ccaagaagtg 200
 gatgttctct cctcttgctg ggggagcctg ggcaggacac tccagggcac 250
 agggggacaa ggtgctgggg ggtcatgagt gccaacccca ttgcagcct 300
 tggcaggggg ccttggttca gggccagcaa ctactctgtg ggggtgtct 350
 tgtagggtgg aactgggtcc ttacagctgc ccaactgtaaa aaacggaaat 400
 acacagtaag cctggggagac cacagcctac agaataaaga tggccagag 450
 caagaaatac ctgtgggtca gtccatccca caccctgct acaacagcag 500
 ccatgtggag gaccacaacc atgatctgat gcttcttcaa ctgggtgacc 550
 aggcctcctt ggggtccaaa gtgaagccca tcagcctggc agatcattgc 600
 accagcctg gccagaagt caccgtctca ggtggggga ctgtcaccag 650
 tcccgagag aatttctctg acactctcaa ctgtgcagaa gtaaaaaat 700
 tcccccagaa gaagtgtgag gatgcttacc cggggcagat cacagatggc 750
 atgtctctgt caggcagcag caaaggggct gacagtgcc agggcgattc 800
 tggaggcccc ctgggtgtgt atggtgcact ccagggcctc acatcctggg 850
 gctcagaccc ctgtgggagg tccgacaaa ccggggtcta taccacatc 900
 tgcctctacc tggactggat caagaagatc ataggcagca agggctgatt 950
 ctaggataag cactagatct ccttaataa actcacaact ctctggttc 999

<110 - 395
 <111 - 260
 <112 - PRT
 <113 - Homo sapiens

<110 - 395
 Met Gly Arg Pro Arg Pro Arg Ala Ala Lys Thr Trp Met Phe Leu
 1 5 10 15
 Leu Leu Leu Gly Gly Ala Trp Ala Gly His Ser Arg Ala Gln Glu
 20 25 30
 Asp Lys Val Leu Gly Gly His Glu Cys Gln Pro His Ser Gln Pro
 35 40 45
 Trp Gln Ala Ala Leu Phe Gln Gly Gln Gln Leu Leu Cys Gly Gly
 50 55 60
 Val Leu Val Gly Gly Asn Trp Val Leu Thr Ala Ala His Cys Lys
 65 70 75

Lys	Pro	Lys	Tyr	Thr	Val	Arg	Leu	Gly	Asp	His	Ser	Leu	Gln	Asn	
				80					85					90	
Lys	Asp	Gly	Pro	Glu	Gln	Glu	Ile	Pro	Val	Val	Gln	Ser	Ile	Pro	
			95						100					105	
His	Pro	Cys	Tyr	Asn	Ser	Ser	Asp	Val	Glu	Asp	His	Asn	His	Asp	
			110						115					120	
Leu	Met	Leu	Leu	Gln	Leu	Arg	Asp	Gln	Ala	Ser	Leu	Gly	Ser	Lys	
			125						130					135	
Val	Lys	Pro	Ile	Ser	Leu	Ala	Asp	His	Cys	Thr	Gln	Pro	Gly	Gln	
			140						145					150	
Lys	Cys	Thr	Val	Ser	Gly	Trp	Gly	Thr	Val	Thr	Ser	Pro	Arg	Gln	
			155						160					165	
Asn	Phe	Pro	Asp	Thr	Leu	Asn	Cys	Ala	Glu	Val	Lys	Ile	Phe	Pro	
			170						175					180	
Gln	Lys	Lys	Cys	Glu	Asp	Ala	Tyr	Pro	Gly	Gln	Ile	Thr	Asp	Gly	
			185						190					195	
Met	Val	Cys	Ala	Gly	Ser	Ser	Lys	Gly	Ala	Asp	Thr	Cys	Gln	Gly	
			200						205					210	
Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Asp	Gly	Ala	Leu	Gln	Gly	Ile	
			215						220					225	
Thr	Ser	Trp	Gly	Ser	Asp	Pro	Cys	Gly	Arg	Ser	Asp	Lys	Pro	Gly	
			230						235					240	
Val	Tyr	Thr	Asn	Ile	Cys	Arg	Tyr	Leu	Asp	Trp	Ile	Lys	Lys	Ile	
			245						250					255	
Ile	Gly	Ser	Lys	Gly											
			260												

<210> 336

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<230> 336

gagcctacag aataaagatg gcc 24

<240> 337

<241> 24

<242> DNA

<243> Artificial Sequence

<250>

<223> Synthetic oligonucleotide probe

<400> 327

ggggcaatga ttgacagga tgat 24

<219> 328

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

agaaataact gtgggttcagt caatccaaaa cccctgctac aacagcag 48

<210> 329

<211> 2536

<212> DNA

<213> Homo sapiens

<400> 329

ggggccgttg caacgggggg gctgaggggc tctgggggc cggcctgggc 50

ggcctggggc gctgggggc caacgggggc aacgggggc gggccccccta 100

ccccccgggc gggccgggc cgggggggc gccaggtga gggctccggc 150

cggcgagagg ccccgcccg gcccggggc gcccggggc ggcgggggg 200

ggaaacgggc ggattctctg cgggtcaaac cactgctcc cataaaacat 250

tcattctccc gggggggggc gctgggaggg ccccgccagt cggcgccggc 300

gacccctctg cctgttgggc cctggggggc ctgggcaccc ggggcccag 350

cccagcaga gccgggggga ggggaggggc ccgagcctct tcccggggc 400

gggcccgggc cgggcccgtg cggggggggc tggatgggga cccggccgg 450

gggagagggg cggccggggc gaaaagactt tcagtcccg agggccccc 500

ccaaacccct acgatgaaga gggcgctccgc tggagggagc cggctgcttg 550

cattgggtgt gtgggtgag gctgggcagg tggcagcccc atgcccaggt 600

gcttgcttat gctacaatga gcccaaggtg acgacaagct gcccccagca 650

gggctctgag gctgtgcccc tgggcatccc tggcgccagc caggccatct 700

tcttgccagg caacggcatc cggcatgtgc cagctgcccg cttccgtgac 750

tgcggcaaac tcaccatcct gtgggtgcac tcgaatgtgc tggcccgaa 800

tgatggggct gcttcaactg gctgggcctt cctggagcag ctggacctca 850

gggataatgc acagctccgg tctgtggacc ctgccacatt ccaaggcctg 900

ggcgcgcctac acaagctgca cctggacgcg tcgcggcctgc aggagctggg 1950
cccggggctg ttccggggcc tggctgcctt gcagtaacct tacctgcagg 1960
acaacggctt gcaggcaact cctgatgaca ccttcggcga cctgggcaac 1970
ctcacacacc tcttcctgca cggcaacgcg atctccagcg tgcgcgagcg 1980
cgcttcctgt gggctgcaca gcctcgacgg tctcctaact caccagaacc 1990
ggctggccca tctgcacccg catgccttcc gtgaccttgg ccgcctcatg 2000
acaactctat cgtttgcaca caactctatc ggctgcccac ctgaggccct 2010
ggcccccctg cgtgccttgc agtaacctgag gctcaacgac aacccctggg 2020
tgtgtgactg ccgggcaagg caactctggg cctggctgca gaagtccgcg 2030
ggctcctcct ccgaggtgac ctgcagcctc ccgcaacgac tggctggccg 2040
tgacctcaaa cgcctagctg caatgacct gcagggttgc gctgtggcca 2050
ccggccctta caatccctc tggacgggca gggccaccca tgaggagccg 2060
ctggggcttc caagtgtg ccagccagat gcctctgaca aggcctcagt 2070
actggagcct ggaagaccag ctccggcagg caatgcctg aagggaacgg 2080
tgcggccggg tgacagcccg ccgggcaacg gctctggccc acggcacctc 2090
aatgactcac cctttgggac tctgccttgc tctgctgagc ccccgctcac 2100
tgacgtgggg ccgaggggtt ccgagccacc aggtttcccc acctcggggc 2110
ctcgcgggag gccaggttgt tcacgcaaga accgcacccg cagccactgc 2120
cgtctggggc aggcagccag cgggggttgc gggacttgtg actcagaagg 2130
ctcaggttgc ctacccagcc tcacctgag cctcaacccc ctgggccttg 2140
cgcgggttgt gtcgacagt ctggggccct gctgaccccc agcggacaca 2150
agaacctgtt cagcagccag gtgtgtgtac atacgggtt cctctccacg 2160
ccgcacaagg agccgggggg ccgacccgtg gggcaggcca ggcacggctc 2170
tccctgatgg acccctgcgg ccgcacccc caatctcac cccatcatgt 2180
ttaaaggtt cggcggcagg gtttgttcca gaacgcggcc tccacccag 2190
atcgcggtat atagagatat gcattttatt ctacttgtgt aaaaatatcg 2200
gacgacgtgg aataaagagc tcttttctta aaaaaa 2236

<210 = 400

<211 = 473

<212> PRT

<213> Homo sapiens

<400> 400

Met	Lys	Arg	Ala	Ser	Ala	Gly	Gly	Ser	Arg	Leu	Leu	Ala	Trp	Val
1				5					10					15
Leu	Trp	Leu	Gln	Ala	Trp	Gln	Val	Ala	Ala	Pro	Cys	Pro	Gly	Ala
			20						25					30
Cys	Val	Cys	Tyr	Asn	Glu	Pro	Lys	Val	Thr	Thr	Ser	Cys	Pro	Gln
			35						40					45
Gln	Gly	Leu	Gln	Ala	Val	Pro	Val	Gly	Ile	Pro	Ala	Ala	Ser	Gln
			50						55					60
Arg	Ile	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	His	Val	Pro	Ala	Ala
			65						70					75
Ser	Phe	Arg	Ala	Cys	Arg	Asn	Leu	Thr	Ile	Leu	Trp	Leu	His	Ser
			80						85					90
Asn	Val	Leu	Ala	Arg	Ile	Asp	Ala	Ala	Ala	Phe	Thr	Gly	Leu	Ala
			95						100					105
Leu	Leu	Glu	Gln	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Gln	Leu	Arg	Ser
			110						115					120
Val	Asp	Pro	Ala	Thr	Phe	His	Gly	Leu	Gly	Arg	Leu	His	Thr	Leu
			125						130					135
His	Leu	Asp	Arg	Cys	Gly	Leu	Gln	Glu	Leu	Gly	Pro	Gly	Leu	Phe
			140						145					150
Arg	Gly	Leu	Ala	Ala	Leu	Gln	Tyr	Leu	Tyr	Leu	Gln	Asp	Asn	Ala
			155						160					165
Leu	Gln	Ala	Leu	Pro	Asp	Asp	Thr	Phe	Arg	Asp	Leu	Gly	Asn	Leu
			170						175					180
Thr	His	Leu	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	Ser	Val	Pro	Glu
			185						190					195
Arg	Ala	Phe	Arg	Gly	Leu	His	Ser	Leu	Asp	Arg	Leu	Leu	Leu	His
			200						205					210
Gln	Asn	Arg	Val	Ala	His	Val	His	Pro	His	Ala	Phe	Arg	Asp	Leu
			215						220					225
Gly	Arg	Leu	Met	Thr	Leu	Tyr	Leu	Phe	Ala	Asn	Asn	Leu	Ser	Ala
			230						235					240
Leu	Pro	Thr	Glu	Ala	Leu	Ala	Pro	Leu	Arg	Ala	Leu	Gln	Tyr	Leu
			245						250					255
Arg	Leu	Asn	Asp	Asn	Pro	Trp	Val	Cys	Asp	Cys	Arg	Ala	Arg	Pro
			260						265					270

Leu Trp Ala Trp	Leu Gln Lys Phe Arg	Gly Ser Ser Ser	Glu Val
275		280	285
Pro Cys Ser Leu	Pro Gln Arg Leu Ala	Gly Arg Asp Leu Lys	Arg
290		295	300
Leu Ala Ala Asn	Asp Leu Gln Gly Cys	Ala Val Ala Thr	Gly Pro
305		310	315
Tyr His Pro Ile	Trp Thr Gly Arg Ala	Thr Asp Glu Glu	Pro Leu
320		325	330
Gly Leu Pro Lys	Cys Cys Gln Pro Asp	Ala Ala Asp Lys	Ala Ser
335		340	345
Val Leu Glu Pro	Gly Arg Pro Ala Ser	Ala Gly Asn Ala	Leu Lys
350		355	360
Gly Arg Val Pro	Pro Gly Asp Ser Pro	Pro Gly Asn Gly	Ser Gly
365		370	375
Pro Arg His Ile	Asn Asp Ser Pro Phe	Gly Thr Leu Pro	Gly Ser
380		385	390
Ala Glu Pro Pro	Leu Thr Ala Val Arg	Pro Glu Gly Ser	Glu Pro
395		400	405
Pro Gly Phe Pro	Thr Ser Gly Pro Arg	Arg Arg Pro Gly	Cys Ser
410		415	420
Arg Lys Asn Arg	Thr Arg Ser His Cys	Arg Leu Gly Gln	Ala Gly
425		430	435
Ser Gly Gly Gly	Gly Thr Gly Asp Ser	Glu Gly Ser Gly	Ala Leu
440		445	450
Pro Ser Leu Thr	Cys Ser Leu Thr Pro	Leu Gly Leu Ala	Leu Val
455		460	465
Leu Trp Thr Val	Leu Gly Pro Cys		
470			

<210> 401

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<300> 401

Aggctgcacct gcagtagctc tacc 24

<310> 402

<311> 14

<312> DNA

<013> Artificial Sequence

<010>

<011> Synthetic oligonucleotide probe

<400> 402

ccctgcaggt cattggcagc tagg 24

<010> 403

<011> 45

<012> DNA

<013> Artificial Sequence

<010>

<011> Synthetic oligonucleotide probe

<400> 403

agggactgac tgatgacac ttccgggac ttgggaacot cacac 45

<011> 404

<011> 2'33

<012> DNA

<013> Homo sapiens

<400> 404

ggaagtcac ggggagcttg gatgcacaaag ggaggacggc tgggtcctct 50
gagagagact actcactggc atattttctga ggtatctgta gaataaccac 100
agcttcagat actgggggact ttacagtccc acagaacagt cctcccagga 150
agctgaatcc agcaagaaca atggaggcca gggggaagct catttgaga 200
aaaaggcaag tctttttttt cttttctctt ttgggcttat ctctggcggg 250
ggcggcagaa cctagaagct attctgtggt ggaggaaact gagggcagct 300
cctttgtcac caatttagca aaggacctgg gctgggagca gagggcaattc 350
cccaggcggg gggctagggt tgtttccaga gggaacaaaac tacatttgca 400
gctcaatcag gagacggcgg atttggtgct aaatgagaaa ttggacagtg 450
aggatctgtg cggtcacaca gagccctgtg tgcacgttt ccaagtgttg 500
ctagagagtc ccttcaggtt ttttcaagct gagctgcaag taatagacat 550
aaaagaacac tctccagtat ttctggacaa acaaagtgtg gtgaaagtat 600
cagagagcag tctcctggg actacgttct ctctgaagaa tgcgcgaagac 650
ctagatctag gcaaaaacaa tattgagaac tatataatca gccccaactc 700
ctatttttgg gtctccccc gccaaacagc tgatggcagg aaatacccag 750
agctggtgct ggacaaaagc ctggaccgag aggaagaagc tgagctcagg 800

ttaacactca cagcaactgga tgggtgggtct ccgcccagat ctggcactgc 850
 tcaggtctac atogaagtcg tggatgtcaa cgataatgac cctgaatttg 900
 agoagccttc ctatagagtg cagatctctg aggacagtcg ggtaggcttc 950
 cgggtgtgta aggtctctgc caccgcatga gacacaggag tcaacggaga 1000
 gatttctat caacttttcc aagcttcaga agagattggc aaaaccttca 1050
 agatcaatcc cttgacagga gaaattgaac taaaaaaca actcgatttc 1100
 gaaaaacttc agtctatga agtcaatatt gaggaagag atgttggaac 1150
 ctttctggga aaatgcacgc ctctgattca agtgatagat gtaaacgacc 1200
 atgcccaga agttaacctg ctctgattca ccagcccact acctgayaac 1250
 gggctgaaa ctgtgggttg acctttcagt gtttcagacc ttgattcagg 1300
 agaaaatggg aaaattagtc gctccattca ggaggatcta ccttctctcc 1350
 cgaaatccgc ggaaaaactt tacacctac taaaggagag accactagac 1400
 agagaaagca gagcggaata caacatcact atcaactgtc ctgacttggg 1450
 gacctctatg ctgataaac agtcaatat gacgtgtgtg atgcccagtc 1500
 tcaatgacaa cgtccccgc ttcccccac cctctacac cctgttcgtc 1550
 cgggagacaa acagcccgc cctgcacat cgcagcgta ggcctacaga 1600
 cagagactca ggacccaacg ccaggtcac ctactcgctg ctgcccctcc 1650
 aggacccga cctgcccctc acatccctgg ctctcatcaa cggggacaa 1700
 ggccacctgt cggccctcag gtctctggac taagaggccc tgcaggggtt 1750
 ccagttccgc gtggggcgtt cagaccaag ctcccgggcg ctgagcagcg 1800
 agggcgtggt gggcgtggtg gtgctggacg ccacagacaa ctgccccttc 1850
 gtgctgtacc cgttcagaa cggctccgc cctgcacgc agctgggtgc 1900
 cggggcggcc gagccgggt acctggtgac caaggtggtg ggggtggacg 1950
 ggaactcggg ccagaaacgc ttgctgtcgt accagctgct caaggccacg 2000
 gagctcggtc tgttcgggt gtgggggcac aatggcgagg tgggcacgc 2050
 caggctgctg agcgagcgcg accgggcac gacaggctg gtggtgctgg 2100
 tcaaggacaa tggcgagcct ccgctctcg ccacggccac gctgcaagtc 2150
 cctctggtgg accgtctctc ccagccctac ctgctctctc cggaggcggc 2200
 ccgacccag gcccaggccg acttgcctac cgtctacctg gtggtgggt 2250

tgggctcgggt gtcttcgcgc ttctctcttt cggcgctcct gttcgtggcg 2200
 gtggggctgt gtaggaggag cagggcggcc tgggtgggtc gctgcttggg 2350
 gcccaggggc ccccttcacg ggcctcttgt ggacatgagc ggcaccagga 2400
 cccatccca gagctaccag tatgaggtgt gtctggcagg aggtccaggg 2450
 accaatgagt tcaagttcct gaagccgatt atccccaact tccctccca 2500
 gggccctggg aaagaaatac aaggaaatto taccctccca aataaacttg 2550
 ggttcaatat tcagtgcaca tagttgaact ttacattcca taggtatttt 2600
 attttgtggc attcccatgc caatgtttat tcccccacat ttgtgtgtat 2650
 gtaatatgtt acggatttac ccttgatttt tctcatgttc tctctccctt 2700
 tgttttaaag tgaacattta cctttattcc tggttcct 2738

<210> 405
 <211> 798
 <212> PRT
 <213> Homo sapiens

<401> 405
 Met Glu Ala Ser Gly Lys Leu Ile Cys Arg Gln Arg Gln Val Leu
 1 5 10 15
 Phe Ser Phe Leu Leu Leu Gly Leu Ser Leu Ala Gly Ala Ala Glu
 20 25 30
 Pro Arg Ser Tyr Ser Val Val Glu Glu Thr Glu Gly Ser Ser Phe
 35 40 45
 Val Thr Asn Leu Ala Lys Asp Leu Gly Leu Glu Gln Arg Glu Phe
 50 55 60
 Ser Arg Arg Gly Val Arg Val Val Ser Arg Gly Asn Lys Leu His
 65 70 75
 Leu Gln Leu Asn Gln Glu Thr Ala Asp Leu Leu Leu Asn Glu Lys
 80 85 90
 Leu Asp Arg Glu Asp Leu Cys Gly His Thr Glu Pro Cys Val Leu
 95 100 105
 Arg Phe Gln Val Leu Leu Glu Ser Pro Phe Glu Phe Phe Gln Ala
 110 115 120
 Glu Leu Gln Val Ile Asp Ile Asn Asp His Ser Pro Val Phe Leu
 125 130 135
 Asp Lys Gln Met Leu Val Lys Val Ser Glu Ser Ser Pro Pro Gly
 140 145 150

Thr	Thr	Phe	Pro	Leu	Lys	Asn	Ala	Glu	Asp	Leu	Asp	Val	Gly	Gln			
				195					160					165			
Asn	Asn	Ile	Glu	Asn	Tyr	Ile	Ile	Ser	Pro	Asn	Ser	Tyr	Phe	Arg			
				170					175					180			
Val	Leu	Thr	Arg	Lys	Arg	Ser	Asp	Gly	Arg	Lys	Tyr	Pro	Glu	Leu			
				185					190					195			
Val	Leu	Asp	Lys	Ala	Leu	Asp	Arg	Glu	Glu	Glu	Ala	Glu	Leu	Arg			
				200					205					210			
Leu	Thr	Leu	Thr	Ala	Leu	Asp	Gly	Gly	Ser	Pro	Pro	Arg	Ser	Gly			
				215					220					225			
Thr	Ala	Gln	Val	Tyr	Ile	Glu	Val	Leu	Asp	Val	Asn	Asp	Asn	Ala			
				230					235					240			
Pro	Glu	Phe	Glu	Gln	Pro	Phe	Tyr	Arg	Val	Gln	Ile	Ser	Glu	Asp			
				245					250					255			
Ser	Pro	Val	Gly	Phe	Leu	Val	Val	Lys	Val	Ser	Ala	Thr	Asp	Val			
				260					265					270			
Asp	Thr	Gly	Val	Asn	Gly	Glu	Ile	Ser	Tyr	Ser	Leu	Phe	Gln	Ala			
				275					280					285			
Ser	Glu	Glu	Ile	Gly	Lys	Thr	Phe	Lys	Ile	Asn	Pro	Leu	Thr	Gly			
				290					295					300			
Glu	Ile	Glu	Leu	Lys	Lys	Gln	Leu	Asp	Phe	Glu	Lys	Leu	Gln	Ser			
				305					310					315			
Tyr	Glu	Val	Asn	Ile	Glu	Ala	Arg	Asp	Ala	Gly	Thr	Phe	Ser	Gly			
				320					325					330			
Lys	Cys	Thr	Val	Leu	Ile	Gln	Val	Ile	Asp	Val	Asn	Asp	His	Ala			
				335					340					345			
Pro	Glu	Val	Thr	Met	Ser	Ala	Phe	Thr	Ser	Pro	Ile	Pro	Glu	Asn			
				350					355					360			
Ala	Pro	Glu	Thr	Val	Val	Ala	Leu	Phe	Ser	Val	Ser	Asp	Leu	Asp			
				365					370					375			
Ser	Gly	Glu	Asn	Gly	Lys	Ile	Ser	Cys	Ser	Ile	Gln	Glu	Asp	Leu			
				380					385					390			
Pro	Phe	Leu	Leu	Lys	Ser	Ala	Glu	Asn	Phe	Tyr	Thr	Leu	Leu	Thr			
				395					400					405			
Glu	Arg	Pro	Leu	Asp	Arg	Glu	Ser	Arg	Ala	Glu	Tyr	Asn	Ile	Thr			
				410					415					420			
Ile	Thr	Val	Thr	Asp	Leu	Gly	Thr	Pro	Met	Leu	Ile	Thr	Gln	Leu			
				425					430					435			

Asn Met Thr Val	Leu Ile Ala Asp Val	Asn Asp Asn Ala Pro	Ala
440		445	450
Phe Thr Gln Thr	Ser Tyr Thr Leu Phe	Val Arg Glu Asn Asn Ser	
455		460	465
Pro Ala Leu His	Ile Arg Ser Val Ser	Ala Thr Asp Arg Asp Ser	
470		475	480
Gly Thr Asn Ala	Gln Val Thr Tyr Ser	Leu Leu Pro Pro Gln Asp	
485		490	495
Pro His Leu Pro	Leu Thr Ser Leu Val	Ser Ile Asn Ala Asp Asn	
500		505	510
Gly His Leu Phe	Ala Leu Arg Ser Leu	Asp Tyr Glu Ala Leu Gln	
515		520	525
Gly Phe Gln Phe	Arg Val Gly Ala Ser	Asp His Gly Ser Pro Ala	
530		535	540
Leu Ser Ser Glu	Ala Leu Val Arg Val	Val Val Leu Asp Ala Asn	
545		550	555
Asp Asn Ser Pro	Phe Val Leu Tyr Pro	Leu Gln Asn Gly Ser Ala	
560		565	570
Pro Cys Thr Glu	Leu Val Pro Arg Ala	Ala Glu Pro Gly Tyr Leu	
575		580	585
Val Thr Lys Val	Val Ala Val Asp Gly	Asp Ser Gly Gln Asn Ala	
590		595	600
Trp Leu Ser Tyr	Gln Leu Leu Lys Ala	Thr Glu Leu Gly Leu Phe	
605		610	615
Gly Val Trp Ala	His Asn Gly Glu Val	Arg Thr Ala Arg Leu Leu	
620		625	630
Ser Glu Arg Asp	Ala Ala Lys His Arg	Leu Val Val Leu Val Lys	
635		640	645
Asp Asn Gly Glu	Pro Pro Arg Ser Ala	Thr Ala Thr Leu His Val	
650		655	660
Leu Leu Val Asp	Gly Phe Ser Gln Pro	Tyr Leu Pro Leu Pro Glu	
665		670	675
Ala Ala Pro Thr	Gln Ala Gln Ala Asp	Leu Leu Thr Val Tyr Leu	
680		685	690
Val Val Ala Leu	Ala Ser Val Ser Ser	Leu Phe Leu Phe Ser Val	
695		700	705
Leu Leu Phe Val	Ala Val Arg Leu Cys	Arg Arg Ser Arg Ala Ala	
710		715	720

Ser Val Gly Arg Cys Leu Val Pro Glu Gly Pro Leu Pro Gly His
725 730 735

Leu Val Asp Met Ser Gly Thr Arg Thr Leu Ser Gln Ser Tyr Gln
740 745 750

Tyr Glu Val Cys Leu Ala Gly Gly Ser Gly Thr Asn Glu Phe Lys
755 760 765

Phe Leu Lys Pro Ile Ile Pro Asn Phe Pro Pro Gln Cys Pro Gly
770 775 780

Lys Glu Ile Gln Gly Asn Ser Thr Phe Pro Asn Asn Phe Gly Phe
785 790 795

Asn Ile Gln

<110> 406

<111> 23

<112> DNA

<113> Artificial Sequence

<114>

<115> Synthetic oligonucleotide probe

<400> 406

cttgagaacgc gactgaaact gtg 23

<110> 407

<111> 31

<112> DNA

<113> Artificial Sequence

<114>

<115> Synthetic oligonucleotide probe

<400> 417

agactttatca ttgacatcgg cg 22

<110> 418

<111> 59

<112> DNA

<113> Artificial Sequence

<114>

<115> Synthetic oligonucleotide probe

<400> 448

tttaattgttc cattcaggag gatctacct tctctctgaa atccgcggaa 50

<110> 419

<111> 1-79

<112> DNA

<113> Homo sapiens

<400> 499

accacagcgt ccgcaccgc gtcgcaccac gcgtccgcgc accgcctccg 50
 gcgtagccgt gcgcagattg cctctcgggc tgggcaatgg tcccggtgc 100
 cggctcagca ccgcaccgcg tcatcgggct cctcgggtgg tggcaagtac 150
 tgcgtgggtg gctgggaact ccgcctccgc gcgtggaggt tgcagaggaa 200
 agtggctcgt tatggtcaga ggagcagcct gctcaccctc tccaggtggg 250
 ggcgtgtgac ctgggtgagg aggagctcct gcctgacccg atgggcacag 300
 acagggcagc agaagaggcc aatcggttgc tggggctgga caccacaaggc 350
 gatcacatgg tcatgctgtc tctgattcct ggggaagctg aggacaaagt 400
 gajttcagag cctagcggcg tccctgttgg tgcctggagga gcggaggact 450
 caaggtgcac cgtccgagag agccttttct cctcggatgg cgcctggagca 500
 cactccctg acagagaaga ggagtattac acagagccag aagtggcgga 550
 atctgacgca gcccgcacag aggaactcga taacactgaa agtctgaaat 600
 ccccaagggt gaactgtgag gagagaaaca ttacaggatt agaaaaattc 650
 actctgaaaa ttttaaatac gtcacaggac cttatggatt ttctgaacc 700
 aaacggtagt gactgtactc tagtctgtt ttacaccccg tggctccgct 750
 tttctgcag tttggccct cactttaact cctcgcaccg ggcatttcca 800
 gctcttcact ttttggcact ggatgcctc cagcacagca gcctttctac 850
 caggttttgc accgtagctg ttcctaatac ttattattt caaggagcta 900
 aacaaatggc cagatttaac cacaagatc gaacactgga aacactgaaa 950
 atcttcattt ttaatcagac aggtatagaa gccaagaaga atgtggtggt 1000
 aactcaagcc gaccaaatac gccttcttcc cagcactttg ataaaaagt 1050
 tggactgggt gctgttattt tccttattct ttttaattag ttttattatg 1100
 tatgtacca ttcgaaactg agtatctgg tggctaattc caggacaaga 1150
 gcaggaaacat gtggagtagt gatggctcga aagaagttgg aaagaggaa 1200
 ttcaatcctt cgtttcagaa attagtcta cagtctcata cattttctcc 1250
 agtgacgtgt tgaattgaaa ctccaggcag attaaaagaa tcatttggtg 1300
 aacaaactgaa tgtataaaaa aattataaac tgggtgttta actagtattg 1350
 caataagcaa atgcaaaaat attcaatag 1379

01110 360
 01120 PRT
 01130 Homo sapiens

04000 410

Met	Val	Pro	Ala	Ala	Gly	Arg	Arg	Pro	Pro	Arg	Val	Met	Arg	Leu
1				5					10					15
Leu	Gly	Trp	Trp	Gln	Val	Leu	Leu	Trp	Val	Leu	Gly	Leu	Pro	Val
				20					25					30
Arg	Gly	Val	Glu	Val	Ala	Glu	Glu	Ser	Gly	Arg	Leu	Trp	Ser	Glu
				35					40					45
Glu	Gln	Pro	Ala	His	Pro	Leu	Gln	Val	Gly	Ala	Val	Tyr	Leu	Gly
				50					55					60
Glu	Glu	Glu	Leu	Leu	His	Asp	Pro	Met	Gly	Gln	Asp	Arg	Ala	Ala
				65					70					75
Glu	Glu	Ala	Asn	Ala	Val	Leu	Gly	Leu	Asp	Thr	Gln	Gly	Asp	His
				80					85					90
Met	Val	Met	Leu	Ser	Val	Ile	Pro	Gly	Gln	Ala	Glu	Asp	Lys	Val
				95					100					105
Ser	Ser	Glu	Pro	Ser	Gly	Val	Thr	Cys	Gly	Ala	Gly	Gly	Ala	Glu
				110					115					120
Asp	Ser	Arg	Cys	Asn	Val	Arg	Gln	Ser	Leu	Phe	Ser	Leu	Asp	Gly
				125					130					135
Ala	Gly	Ala	His	Phe	Pro	Asp	Arg	Glu	Gln	Glu	Tyr	Tyr	Thr	Glu
				140					145					150
Pro	Glu	Val	Ala	Gln	Ser	Asp	Ala	Ala	Pro	Thr	Gln	Asp	Ser	Asn
				155					160					165
Asn	Thr	Glu	Ser	Leu	Lys	Ser	Pro	Lys	Val	Asn	Cys	Glu	Glu	Arg
				170					175					180
Asn	Ile	Thr	Gly	Leu	Glu	Asn	Phe	Thr	Leu	Lys	Ile	Leu	Asn	Met
				185					190					195
Ser	Gln	Asp	Leu	Met	Asp	Phe	Leu	Asn	Pro	Asn	Gly	Ser	Asp	Tyr
				200					205					210
Thr	Leu	Val	Leu	Phe	Tyr	Thr	Pro	Trp	Cys	Arg	Phe	Ser	Ala	Ser
				215					220					225
Leu	Ala	Pro	His	Phe	Asn	Ser	Leu	Pro	Arg	Ala	Phe	Pro	Ala	Leu
				230					235					240
His	Phe	Leu	Ala	Leu	Asp	Ala	Ser	Gln	His	Ser	Ser	Leu	Ser	Thr
				245					250					255
Arg	Phe	Gly	Thr	Val	Ala	Val	Pro	Asn	Ile	Leu	Leu	Phe	Gln	Gly

260					265					270				
Ala	Lys	Pro	Met	Ala	Arg	Phe	Asn	His	Thr	Asp	Arg	Thr	Leu	Glu
				275					280					285
Thr	Leu	Lys	Ile	Phe	Ile	Phe	Asn	Gln	Thr	Gly	Ile	Glu	Ala	Lys
				290					295					300
Lys	Asn	Val	Val	Val	Thr	Gln	Ala	Asp	Gln	Ile	Gly	Pro	Leu	Pro
				305					310					315
Ser	Thr	Leu	Ile	Lys	Ser	Val	Asp	Trp	Leu	Leu	Val	Phe	Ser	Leu
				320					325					330
Phe	Phe	Leu	Ile	Ser	Phe	Ile	Met	Tyr	Ala	Thr	Ile	Arg	Thr	Glu
				335					340					345
Ser	Ile	Arg	Trp	Leu	Ile	Pro	Gly	Gln	Glu	Gln	Glu	His	Val	Glu
				350					355					360

<210> 411
 <211> 14
 <212> DNA
 <213> Artificial Sequence

<210>
 <211> Synthetic oligonucleotide probe

<210> 411
 <211> caaagaagcca gaagtggcgg aatc 24

<210> 412
 <211> 16
 <212> RNA
 <213> Artificial Sequence

<210>
 <211> Synthetic oligonucleotide probe

<210> 412
 <211> ccacatgctc ctgctatgt cctgg 25

<210> 413
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<210>
 <211> Synthetic oligonucleotide probe

<210> 413
 <211> aggaagcac tgaactctag tctgtttta caccocgtgg tgcgcg 45

<210> 414
 <211> 1136
 <212> DNA
 <213> Homo sapiens

0400 > 414

ccagggtccg ctccctctgc cccctcgggg tcgctggccc accgatgtgc 50
agggcctggg ctggctgtgc ctgctcttcc tcgctcggca ctgctgctgc 100
ggctcggggc gggggtcttc cctcttttgc cagcccgact tctctacaa 150
gggcagcaat tgcaagccca tcccggtcaa cctgcagctg tgcacgggca 200
tcgaatacca gaacatggg ctgcccaccc tgcctgggca ccagaccatg 250
aaggaggtgc tggagcaggg cggcgcttgg atcccgctgg tcatgaagca 300
gtgcaccccg gacaccaaga agttcctgag ctgctcttcc gcccctgctc 350
gcctcagatg cctagacgag accatccagc catgcccctc gctctggctg 400
caggtgaagc accgttggc cccggtccat tcggccttgc gcttccctgc 450
gcctgacatg cttgagtgag accgtttccc ccaggacaa cacccttgc 500
tcccctcgc tagcagcag cactcctgc cagccaccca ggaagctcca 550
aaggtatgag aagcctgcaa aaataaaaa gatgatgaca accacataat 600
ggaaacgctt tgtaaaaatg attttgcact gaaaataaaa gtgaaggaga 650
taacctacat caaccgagat accaaaaaca tctggagac caagagcaag 700
accatttaca agctgaacgg tctgtccgaa agggacctga agaaatcggc 750
gctgttggct aaagacagct tgcagtgca cctgtaggag atgaacgaca 800
tcaacgggca ctatctggct atgggacaga aacagggtgg ggagctggct 850
atccctcgg tgaagcggct gcagaagggg cagagagagt tcaagcgcac 900
ctcccgagc atccgcaagc tgcagtgcta gtcccggcat cctgatggct 950
ccgacaggcc tgcctcagag caaggctgac cacttctgct ccgggatctc 1000
agctccgctt ccccaagcac actcctagct gctccagctt cagcctgggc 1050
agctccccc tgccttttgc accgttgcac ccccagcatt tctgagtta 1100
taaggccaca ggagtgagta gctgttttca cctaaaggaa aagccacccc 1150
gaatcttgta gaaatattca aactaataaa atcatgaata ttttaa 1196

0210 > 415

0211 > 295

0212 > PRT

0213 > Homo sapiens

0400 > 415

Met Leu Gln Gly Pro Gly Ser Leu Leu Leu Leu Phe Leu Ala Ser

1	5	10	15
His Cys Cys Leu Gly	Ser Ala Arg Gly	Leu Phe Leu Phe Gly	Gln
20	25	30	
Pro Asp Phe Ser Tyr	Lys Arg Ser Asn Cys	Lys Pro Ile Pro Val	
35	40	45	
Asn Leu Gln Leu Cys	His Gly Ile Glu Tyr	Gln Asn Met Arg Leu	
50	55	60	
Pro Asn Leu Leu Gly	His Glu Thr Met Lys	Glu Val Leu Glu Gln	
65	70	75	
Ala Gly Ala Trp Ile	Pro Leu Val Met Lys	Gln Cys His Pro Asp	
80	85	90	
Thr Lys Lys Phe Leu	Cys Ser Leu Phe Ala	Pro Val Cys Leu Asp	
95	100	105	
Asp Leu Asp Glu Thr	Ile Gln Pro Cys His	Ser Leu Cys Val Gln	
110	115	120	
Val Lys Asp Arg Cys	Ala Pro Val Met Ser	Ala Phe Gly Phe Pro	
125	130	135	
Trp Pro Asp Met Leu	Glu Cys Asp Arg Phe	Pro Gln Asp Asn Asp	
140	145	150	
Leu Cys Ile Pro Leu	Ala Ser Ser Asp His	Leu Leu Pro Ala Thr	
155	160	165	
Glu Glu Ala Pro Lys	Val Cys Glu Ala Cys	Lys Asn Lys Asn Asp	
170	175	180	
Asp Asp Asn Asp Ile	Met Glu Thr Leu Cys	Lys Asn Asp Phe Ala	
185	190	195	
Leu Lys Ile Lys Val	Lys Glu Ile Thr Tyr	Ile Asn Arg Asp Thr	
200	205	210	
Lys Ile Ile Leu Glu	Thr Lys Ser Lys Thr	Ile Tyr Lys Leu Asn	
215	220	225	
Gly Val Ser Glu Arg	Asp Leu Lys Lys Ser	Val Leu Trp Leu Lys	
230	235	240	
Asp Ser Leu Gln Cys	Thr Cys Glu Glu Met	Asn Asp Ile Asn Ala	
245	250	255	
Pro Tyr Leu Val Met	Gly Gln Lys Gln Gly	Gly Glu Leu Val Ile	
260	265	270	
Thr Ser Val Lys Arg	Trp Gln Lys Gly Gln	Arg Glu Phe Lys Arg	
275	280	285	
Ile Ser Arg Ser Ile	Arg Lys Leu Gln Cys		

<210> 416
 <211> 21
 <211> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 416
 atggttgc tgetgtgt c 21

<210> 417
 <211> 25
 <211> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 417
 cctcctaggt gaactgcaag ctgtc 25

<210> 419
 <211> 47
 <211> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 419
 ctcttctctt ttggcagac gaacttctcc tacaagcgca gaattgc 47

<210> 419
 <211> 1830
 <211> DNA
 <213> Homo sapiens

<400> 419
 gtgagagcgc ccgacgatgg cggggccgac ggaggccgag acgggggttg 50
 ccgagccccc ggcctgtgc ggcagcggg gcacccgac ctacggcgcc 100
 cgtgggtgt tctgtctgc gatcagcctg ctcaactgt ccaacggcac 150
 gctgtggtc agctttgcac ctgtgggtga cgtcattgt gaggacttgg 200
 tctgttccat ggagcagatc aactgggtgt cactgggtct cctcgtggta 250
 tccaccccat ttggcgtggc ggccatctgg atcctggact ccgtcgggct 300
 ccgtgcyggc accatcctgg gtgctgtggt gaactttgc gggagtgtgc 350
 tacgcctggt gcctgcctg gttgttggga cccaaaaccc attgccttc 400

ctcatgggtg gccagagcct ctgtgccctt gccagagcct tggcatcttt 450
ctctccagcc aagctgggtg ccttgtggtt cccagagcac cagcagacca 500
cggccaacat gctcgccacc atgtcgaacc ctctgggggt ccttgtggcc 550
aatgtgtgtt cccctgtgtt ggtcaagaag ggtgaggaca ctccgttaat 600
gctcgggtgt caccacatcc ctgctgggtt cgtctggtt ctgtccacca 650
ctcggctgtg ggagagtgtg ccccccaccc cggcctctga cgggggtgcc 700
agctccacct cagagaagtt cctggatggg ctcaagctga agctcatgtg 750
gaacaaggcc tatgtcatcc tggctgtgtg ctggggggga atgatcggga 800
ctctgcccag cttctcagcc ctccctggag agatcctctg tgcgaaggcc 850
cactccagtg ggtctcccg cctctcggg gctctctcca ccacgtctgg 900
gatccctggg gcactgggtc cgggcacctt tctggacggg accaagcact 950
tcactgagg ccaccaagatt ggctgtgccc tgtctctctt ggctcgggtg 1000
ccctctgccc tgggtcccca gctgcaggga cagacacctg cctcggctga 1050
cactgtctcg ctgtcgggg tgtctggct ctgggtggg cccgtgggca 1100
tggagctggg ggtcaggtgt tccctcccg tggggaggga ggctgcaca 1150
ggcatgatct tctgtctggg gcaggccag ggaatactca tcctgttgg 1200
aatgaaggca ctgactgtg gactgtgga gcctccttg tccacctgcc 1250
agcaggggga ggatccactt gactggacag tctctctgtt gctgatggcc 1300
ggctgtgca cctcttcag ctgcacctg ggggtctctt tccacacccc 1350
atacgggccc ctgcaggccc agtctgggga gccccctcc accgttaacg 1400
ccgtgggggg ccagactcca gggccgggtg tggaccagg gggagcagg 1450
agggctgggg tccctggggc cagcacggcg actccggagt gcacggcag 1500
gggggctcgc ctagaggacc ccagagggcc cgggagcccc caccacgctt 1550
gccacggagc gactccctgt ggcacaggcc cagcagccac cgaaggcccc 1600
tcccgccccg gcagactcgc aggcagggtc caaggttcca ggtttattga 1650
cccggtgggg tctcactcct cctctctctc cccgtgggtg atcacgtaga 1700
tgagcgcctt gtagtccagg ttgcacggca catcgatgga ggogaactgg 1750
aacatctggt ccacctgggg ggggggggga aagggtcctt tgggggtccc 1800
gggagcgaat tacaaggcgc cactgaaaa 1830

42100 420
 42110 560
 42120 PRT
 42130 Homo sapiens

42000 420
 Met Ala Gly Pro Thr Glu Ala Glu Thr Gly Leu Ala Glu Pro Arg
 1 5 10 15
 Ala Leu Cys Ala Gln Arg Gly His Arg Thr Tyr Ala Arg Arg Trp
 20 25 30
 Val Phe Leu Leu Ala Ile Ser Leu Leu Asn Cys Ser Asn Ala Thr
 35 40 45
 Leu Trp Leu Ser Phe Ala Pro Val Ala Asp Val Ile Ala Glu Asp
 50 55 60
 Leu Val Leu Ser Met Glu Gln Ile Asn Trp Leu Ser Leu Val Tyr
 65 70 75
 Leu Val Val Ser Thr Pro Phe Gly Val Ala Ala Ile Trp Ile Leu
 80 85 90
 Asp Ser Val Gly Leu Arg Ala Ala Thr Ile Leu Gly Ala Trp Leu
 95 100 105
 Asn Phe Ala Gly Ser Val Leu Arg Met Val Pro Cys Met Val Val
 110 115 120
 Gly Thr Gln Asn Pro Phe Ala Phe Leu Met Gly Gly Gln Ser Leu
 125 130 135
 Cys Ala Leu Ala Gln Ser Leu Val Ile Phe Ser Pro Ala Lys Leu
 140 145 150
 Ala Ala Leu Trp Phe Pro Glu His Gln Arg Ala Thr Ala Asn Met
 155 160 165
 Leu Ala Thr Met Ser Asn Pro Leu Gly Val Leu Val Ala Asn Val
 170 175 180
 Leu Ser Pro Val Leu Val Lys Lys Gly Glu Asp Ile Pro Leu Met
 185 190 195
 Leu Gly Val Tyr Thr Ile Pro Ala Gly Val Val Cys Leu Leu Ser
 200 205 210
 Thr Ile Cys Leu Trp Glu Ser Val Pro Pro Thr Pro Pro Ser Ala
 215 220 225
 Gly Ala Ala Ser Ser Thr Ser Glu Lys Phe Leu Asp Gly Leu Lys
 230 235 240
 Leu Gln Leu Met Trp Asn Lys Ala Tyr Val Ile Leu Ala Val Cys
 245 250 255

Leu Gly Gly Met	Ile Gly Ile Ser Ala Ser Phe Ser Ala Leu Leu	260	265	270
Glu Gln Ile Leu Cys Ala Ser Gly His	Ser Ser Gly Phe Ser Gly	275	280	285
Leu Cys Gly Ala Leu Phe Ile Thr Phe	Gly Ile Leu Gly Ala Leu	290	295	300
Ala Leu Gly Pro Tyr Val Asp Arg Thr	Lys His Phe Thr Glu Ala	305	310	315
Thr Lys Ile Gly Leu Cys Leu Phe Ser	Leu Ala Cys Val Pro Phe	320	325	330
Ala Leu Val Ser Gln Leu Gln Gly Gln	Thr Leu Ala Leu Ala Ala	335	340	345
Thr Cys Ser Leu Leu Gly Leu Phe Gly	Phe Ser Val Gly Pro Val	350	355	360
Ala Met Glu Leu Ala Val Glu Cys Ser	Phe Pro Val Gly Glu Gly	365	370	375
Ala Ala Thr Gly Met Ile Phe Val Leu	Gly Gln Ala Glu Gly Ile	380	385	390
Leu Ile Met Leu Ala Met Thr Ala Leu	Thr Val Arg Arg Ser Glu	395	400	405
Pro Ser Leu Ser Thr Cys Gln Gln Gly	Glu Asp Pro Leu Asp Trp	410	415	420
Thr Val Ser Leu Leu Leu Met Ala Gly	Leu Cys Thr Phe Phe Ser	425	430	435
Cys Ile Leu Ala Val Phe Phe His Thr	Pro Tyr Arg Arg Leu Gln	440	445	450
Ala Glu Ser Gly Glu Pro Pro Ser Thr	Arg Asn Ala Val Gly Gly	455	460	465
Ala Asp Ser Gly Pro Gly Val Asp Arg	Gly Gly Ala Gly Arg Ala	470	475	480
Gly Val Leu Gly Pro Ser Thr Ala Thr	Pro Glu Cys Thr Ala Arg	485	490	495
Gly Ala Ser Leu Glu Asp Pro Arg Gly	Pro Gly Ser Pro His Pro	500	505	510
Ala Cys His Arg Ala Thr Pro Arg Ala	Gln Gly Pro Ala Ala Thr	515	520	525
Asp Ala Pro Ser Arg Pro Gly Arg Leu	Ala Gly Arg Val Gln Ala	530	535	540

Ser Arg Phe Ile Asp Pro Ala Gly Ser His Ser Ser Phe Ser Ser
545 550 555

Pro Trp Val Ile Thr
560

<110> 411
<111> 24
<112> DNA
<113> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<401> 411
atattctcag cctctctgga gcag 24

<110> 412
<111> 24
<112> DNA
<113> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<401> 412
cgggtcaata aacctggacg ctgg 25

<110> 413
<111> 43
<112> DNA
<113> Artificial Sequence

<120>
<121> Synthetic oligonucleotide probe

<401> 413
tatgtggacc ggaccaagca cttaactgag gcaaccaaga ttg 43

<110> 414
<111> 4313
<112> DNA
<113> Homo sapiens

<401> 414
gtccacacac ctgctcaact gggtcaggtc cctcttagac cagctcttgt 50
ccatcatttg ctgaagtggg caactagtt cccagtagg gggctctccc 100
tggcaattct tgcctggggt ttggacatct cagatcggtt ccaatgaaga 150
tggccttgcc ttgggggtct gcttggttca taatcatcta actatggggac 200
aagggttgtgc cggcagctct gggggaagga gcacgggggt gatcaagcca 250
tcacggaaac actggaggac ttgtccagcc ttgaaagaac tctagtgggt 300

tctgaatcta gcccaacttgg cggtaagcat gatgcaactt ctgcaacttc 350
tgcctgggggt tttgggggca ggtggctact tattcttttt aggggattgt 400
caggaggtga ccaactctac ggtgaaatac caagtgtcag aggaagtggc 450
atctgggtaca gtgatcggga agctgtccca ggaactgggc cgggaggaga 500
ggcggaggca agctgggggc gccttcacag tgttcagct gcctcaggcg 550
ctcccatctc aggtggactc tgaggaaggc ttgctcagca caggcaggcg 600
gtcggatcga gacagctgt gcgacagtg ggatccctgc ctggcttccct 650
ctgatctgct tgcacagggt gatttggctc tgatccatgt ggagatccaa 700
gtctcggaca tcaatgaca ccagccacgg tttcccaaag gcgagcagga 750
gctggaaatc tctgagagcg cctctctggc aaccgggac cccctggaca 800
gagctcttga ccagacaca ggccttaaca cctgcacac ctacactctg 850
tctcccagtg agcaacttgc ctgggatgtc attgtgggac ctgatgagac 900
caaacatgca gaactcatag tgggaagga gctggacagg gaaatccatt 950
cattttttga tctgggtgtta actgcctatg acaatggga ccccccaag 1000
tcaggtacca gcttgggtcaa ggtcaacgtc ttggactcca atgacaatag 1050
ccctgcgttc gctgagagtc cactggcact ggaaatccaa gaagatgctg 1100
cactcggtao gcttctcata aaactgacg ccacagaccc tgaccaaggc 1150
cccaatgggg aggtggagtt ctctctcagt aagcacatgc ctccagaggt 1200
gctggacacc ttcagtattg atgccaagac aggcacagtc attctcgttc 1250
gacctctaga ctatgaaaag aacctgcct acgaggtgga tgttcaggca 1300
agggacctgg gtcccaatcc tatccagcc cattgcaaa tctctatcaa 1350
ggctctggat gtcaatgaca acatcccaag catccacgtc acatgggctt 1400
cccagccatc actgggtgtc gaagctcttc ccaaggacag ttttattgct 1450
cttctcatgg cagatgaact ggattcagga cacaatgggt tggctcactg 1500
ctggctgagc caagagctgg gccacttcag gctgaaaaga actaatggca 1550
acacatacat gttgctaacc aatgccacac tggacagaga gcagtggccc 1600
aaatataccc ccaactctgt agcccaagac caaggactcc agcccttctc 1650
agccaagaaa cagctcagca ttcagatcag tgacatcaac gacaatgcac 1700

ctgtgtttga gaaaagcagg tatgaagtct ccacggggga aaacaactta 1750
 cccctctcttc acctcattac catcaaggct catgatgcag acctggggcat 1800
 caatggaaaa gtctcatacc gcatacagga ctccccagtc gctcaactag 1850
 tagctattga ctccaaacaa ggagaggtca ctggtcagag gtcactgaac 1900
 tatgaagaga tggccgggctt tgagttccag gtgatcgcag aggcacagcgg 1950
 gcaacccatg ctgcatcca ggtctctctgt ggggtcagc ctcttggaag 2000
 ccaatgataa tggcccagag gtgggtccagc ctgtgctcag cgatggaaaa 2050
 gccagcctct ccgtgcttct gaatgcctcc acaggccacc tcttgggtgc 2100
 catcgagact cccaatggct tgggcccagc gggcaactgac acacctccac 2150
 tggccaactca cagctcccg ggatcccttc tgacaaccat tctggcaaga 2200
 gatgcagact cgggggcaaa tggagagccc ctctacagca ccggcaatgg 2250
 aaatgaagcc cactctctca tctccaacc ccatacgggg cagctgtctg 2300
 tcaatgtcac caatgcagc agctcattg ggagtgcgtg ggagctggag 2350
 atagtgttag aggaaccagg aagccccccc ttacagaccc gagccctgtt 2400
 gagggtcctg tttgtcacc gctgtggacca ctgaggggac tcagcccgca 2450
 agcttggggc ctgagcctg tcgatgctga cgggtgatctg cctggctgta 2500
 ctgttgggca tcttgggtt gatccggct ctgttcctgt ccatctgcgc 2550
 gacagaaaag aaggacaaca gggcttaca ctgtcgggag gccgagtcca 2600
 cctaccgcca gcagcccaag aggcaccaga aacacattca gaaggcagac 2650
 atccacctcg tgcctgtgct caggggtcag gccagtgagc ctcttgaagt 2700
 cgggcagtc ccacaaagat tggacaagg ggcgatgat gaagcaggct 2750
 gggacccctg ctgcaggcc cctttccacc tcaccccgac cctgtacagg 2800
 accctgcgtc atcaaggcaa ccaggagca ccggcggaga gccgagaggt 2850
 gctgcaagac accgtcaacc tctttttcaa ccataccagg cagagggaatg 2900
 cctcccggtg gaacctgaac ctcccgagc ccagcctgc cacaggccag 2950
 ccacgtcca ggcctctgaa ggttcaggg agcccccag ggaggctggc 3000
 tggagaccag gccagtgagg aagcccccac gaggcacca gctcctctg 3050
 caacctgag accgcagcga cctctcaat gcaaatgtc cctgagaaa 3100
 gaatccaggg ccgtcagat ctgcccagc ctggtccgc tgtctgtggc 3150

tgccttcggc gagcggaacc ccgtggagga gctcaactgt gattctctct 3200
 ctgttcagca aatctccag ctgtgtctct tgcgcacca ggcaccaatc 3250
 cagcccaaac caaacccacc aggaataag tacttggcca agccaggagg 3300
 cagcaggagt gcaatccag acacagatgg cccaagtcca agggctggag 3350
 gccagacaga cccagaacag gaggaagggc ctttggatcc tgaagaggac 3400
 ctctctgtga agcaactgt agaagaagag ctgtcaagtc tgcgggacc 3450
 cagcacaggt ctggccctgg accggtgag cgcacctgac ccggccctga 3500
 tggcagagct ctctttggcc ctccaccaca actaccgtga caatgtgato 3550
 cccccggatg ctgcagccac ggaggagccg aggaacctcc agacgttcgg 3600
 caaggcagag gcaccagagc tgagcccaac aggcacgagg ctggccagca 3650
 cctttgtctc ggagatgagc tcaactgctg agatgtgtgt ggaacagcgc 3700
 ccagcatgc ccgtggaggc ccctccagag gcgtctgggc ggctctcggc 3750
 ctgcgggagg acctccagtt tagacttggc caccagtcca gctccaggca 3800
 tgaaagtcca aggggaccca ggtggaaaga cggggactga gggcaagagc 3850
 agaggcagca gcagcagcag caggtgcctg tgaacatacc ccagacgctt 3900
 ctggatccaa gaaccagggg ccctagggato tctggacaag agctggtttc 3950
 taaaatcttg taactcacta gctagcggcg gcctgagaac cctagggtga 4000
 ctgatgctac cccacagag gaggcacag ccaccaggact aacagctgac 4050
 tgacccaaag agccctctgt aagcagctct gactcttttg gaggacaggg 4100
 accgtctgtg gctgagataa gctgttctct gcaaaaacata tctggagcac 4150
 aaagggtcag cctctctggc gaacagatgc caccgagtat cacaggcagg 4200
 aaagggtggc cttcttgggt agcaggagtc agggggctgt acctggggg 4250
 tgcacggaaa tgcctctctga cctatcaata aaggaaaagc agtaaaaaaa 4300
 aaaaaaaaaa aaa 4313

(210) 425
 (211) 1184
 (212) SRT
 (213) Homo sapiens

(400) 425
 Met Met Gln Leu Leu Gln Leu Leu Leu Gly Leu Leu Gly Pro Gly
 1 5 10 15

Gly Tyr Leu Phe	Leu Leu Gly Asp Cys	Gln Glu Val Thr Thr	Leu
	20	25	30
Thr Val Lys Tyr	Gln Val Ser Glu Glu	Val Pro Ser Gly Thr	Val
	35	40	45
Ile Gly Lys Leu	Ser Gln Glu Leu Gly	Arg Glu Glu Arg Arg	Arg
	50	55	60
Gln Ala Gly Ala	Ala Phe Gln Val Leu	Gln Leu Pro Gln Ala	Leu
	65	70	75
Pro Ile Gln Val	Asp Ser Glu Glu Gly	Leu Leu Ser Thr Gly	Arg
	80	85	90
Arg Leu Asp Arg	Gln Gln Leu Cys Arg	Gln Trp Asp Pro Cys	Leu
	95	100	105
Val Ser Phe Asp	Val Leu Ala Thr Gly	Asp Leu Ala Leu Ile	His
	110	115	115
Val Glu Ile Gln	Val Leu Asp Ile Asn	Asp His Gln Pro Arg	Phe
	120	125	130
Pro Lys Gly Glu	Gln Glu Leu Glu Ile	Ser Glu Ser Ala Ser	Leu
	140	145	145
Arg Thr Arg Ile	Pro Leu Asp Arg Ala	Leu Asp Pro Asp Thr	Gly
	150	155	160
Pro Asn Thr Leu	His Thr Tyr Thr Leu	Ser Pro Ser Glu His	Phe
	170	175	180
Ala Leu Asp Val	Ile Val Gly Pro Asp	Glu Thr Lys His Ala	Glu
	185	190	195
Leu Ile Val Val	Lys Glu Leu Asp Arg	Glu Ile His Ser Phe	Phe
	200	205	210
Asp Leu Val Leu	Thr Ala Tyr Asp Asn	Gly Asn Pro Pro Lys	Ser
	215	220	225
Gly Thr Ser Leu	Val Lys Val Asn Val	Leu Asp Ser Asn Asp	Asn
	230	235	240
Ser Pro Ala Phe	Ala Glu Ser Ser Leu	Ala Leu Glu Ile Gln	Glu
	245	250	255
Asp Ala Ala Pro	Gly Thr Leu Leu Ile	Lys Leu Thr Ala Thr	Asp
	260	265	270
Pro Asp Gln Gly	Pro Asn Gly Glu Val	Glu Phe Phe Leu Ser	Lys
	275	280	285
His Met Pro Pro	Glu Val Leu Asp Thr	Phe Ser Ile Asp Ala	Lys
	290	295	300

Thr Gly Gln Val	Ile Leu Arg Arg	Pro Leu Asp Tyr	Glu Lys Asn
305		310	315
Pro Ala Tyr Glu	Val Asp Val Gln Ala	Arg Asp Leu Gly	Pro Asn
320		325	330
Pro Ile Pro Ala	His Cys Lys Val	Leu Ile Lys Val	Leu Asp Val
335		340	345
Asn Asp Asn Ile	Pro Ser Ile His	Val Thr Trp Ala	Ser Gln Pro
350		355	360
Ser Leu Val Ser	Glu Ala Leu Pro	Lys Asp Ser Phe	Ile Ala Leu
365		370	375
Val Met Ala Asp	Asp Leu Asp Ser	Gly His Asn Gly	Leu Val His
380		385	390
Cys Trp Leu Ser	Gln Glu Leu Gly	His Phe Arg Leu	Lys Arg Thr
395		400	405
Asn Gly Asn Thr	Tyr Met Leu Leu	Thr Asn Ala Thr	Leu Asp Arg
410		415	420
Glu Gln Trp Pro	Lys Tyr Thr Leu	Thr Leu Leu Ala	Gln Asp Gln
425		430	435
Gly Leu Gln Pro	Leu Ser Ala Lys	Lys Gln Leu Ser	Ile Gln Ile
440		445	450
Ser Asp Ile Asn	Asp Asn Ala Pro	Val Phe Glu Lys	Ser Arg Tyr
455		460	465
Glu Val Ser Thr	Arg Glu Asn Asn	Leu Pro Ser Leu	His Leu Ile
470		475	480
Thr Ile Lys Ala	His Asp Ala Asp	Leu Gly Ile Asn	Gly Lys Val
485		490	495
Ser Tyr Arg Ile	Gln Asp Ser Pro	Val Ala His Leu	Val Ala Ile
500		505	510
Asp Ser Asn Thr	Gly Glu Val Thr	Ala Gln Arg Ser	Leu Asn Tyr
515		520	525
Glu Glu Met Ala	Gly Phe Glu Phe	Gln Val Ile Ala	Glu Asp Ser
530		535	540
Gly Gln Pro Met	Leu Ala Ser Ser	Val Ser Val Trp	Val Ser Leu
545		550	555
Leu Asp Ala Asn	Asp Asn Ala Pro	Glu Val Val Gln	Pro Val Leu
560		565	570
Ser Asp Gly Lys	Ala Ser Leu Ser	Val Leu Val Asn	Ala Ser Thr
575		580	585

Gly His Leu Leu Val Pro Ile Glu Thr	Pro Asn Gly Leu Gly Pro	595	599
Ala Gly Thr Asp Thr Pro Pro Leu Ala	Thr His Ser Ser Arg Pro	605	615
Phe Leu Leu Thr Thr Ile Val Ala Arg	Asp Ala Asp Ser Gly Ala	620	630
Asn Gly Glu Pro Leu Tyr Ser Ile Arg	Asn Gly Asn Glu Ala His	635	645
Leu Phe Ile Leu Asn Pro His Thr Gly	Gln Leu Phe Val Asn Val	650	660
Thr Asn Ala Ser Ser Leu Ile Gly Ser	Gln Trp Glu Leu Glu Ile	665	675
Val Val Glu Asp Gln Gly Ser Pro Pro	Leu Gln Thr Arg Ala Leu	680	690
Leu Arg Val Met Phe Val Thr Ser Val	Asp His Leu Arg Asp Ser	695	705
Ala Arg Lys Pro Gly Ala Leu Ser Met	Ser Met Leu Thr Val Ile	710	720
Cys Leu Ala Val Leu Leu Gly Ile Phe	Gly Leu Ile Leu Ala Leu	725	735
Phe Met Ser Ile Cys Arg Thr Glu Lys	Lys Asp Asn Arg Ala Tyr	740	750
Asn Cys Arg Glu Ala Glu Ser Thr Tyr	Arg Gln Gln Pro Lys Arg	755	765
Pro Gln Lys His Ile Gln Lys Ala Asp	Ile His Leu Val Pro Val	770	780
Leu Arg Gly Gln Ala Gly Glu Pro Cys	Gln Val Gly Gln Ser His	785	795
Lys Asp Val Asp Lys Glu Ala Met Met	Gln Ala Gly Trp Asp Pro	800	810
Cys Leu Gln Ala Pro Phe His Leu Thr	Pro Thr Leu Tyr Arg Thr	815	825
Leu Arg Asn Gln Gly Asn Gln Gly Ala	Pro Ala Glu Ser Arg Gln	830	840
Val Leu Gln Asp Thr Val Asn Leu Leu	Phe Asn His Pro Arg Gln	845	855
Arg Asn Ala Ser Arg Glu Asn Leu Asn	Leu Pro Glu Pro Gln Pro	860	870

Ala Thr Gly Gln Pro Arg Ser Arg Pro Leu Lys Val Ala Gly Ser	375	380	385
Pro Thr Gly Arg Leu Ala Gly Asp Gln Gly Ser Glu Glu Ala Pro	390	395	400
Gln Arg Pro Pro Ala Ser Ser Ala Thr Leu Arg Arg Gln Arg His	405	410	415
Leu Asn Gly Lys Val Ser Pro Glu Lys Glu Ser Gly Pro Arg Gln	420	425	430
Ile Leu Arg Ser Leu Val Arg Leu Ser Val Ala Ala Phe Ala Glu	435	440	445
Arg Asn Pro Val Gln Glu Leu Thr Val Asp Ser Pro Pro Val Gln	450	455	460
Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln	465	470	475
Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly	480	485	490
Gly Ser Arg Ser Ala Ile Pro Asp Thr Asp Gly Pro Ser Ala Arg	495	1000	1005
Ala Gly Gly Gln Thr Asp Pro Glu Gln Glu Glu Gly Pro Leu Asp	1010	1015	1020
Pro Glu Glu Asp Leu Ser Val Lys Gln Leu Leu Glu Glu Glu Leu	1025	1030	1035
Ser Ser Leu Leu Asp Pro Ser Thr Gly Leu Ala Leu Asp Arg Leu	1040	1045	1050
Ser Ala Pro Asp Pro Ala Trp Met Ala Arg Leu Ser Leu Pro Leu	1055	1060	1065
Thr Thr Asn Tyr Arg Asp Asn Val Ile Ser Pro Asp Ala Ala Ala	1070	1075	1080
Thr Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Ala Glu Ala	1085	1090	1095
Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val	1100	1105	1110
Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Glu Gln Arg Ser	1115	1120	1125
Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser	1130	1135	1140
Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala	1145	1150	1155

Ser Gly Met Lys Val Gln Gly Asp Pro Gly Gly Lys Thr Gly Thr
1160 1165 1170

Ileu Gly Lys Ser Arg Gly Ser Ser Ser Ser Arg Cys Leu
1175 1180

210 416

211 24

212 DNA

213 Artificial Sequence

220

223 Synthetic oligonucleotide probe

240 416

gttaagacat gctccagag gtgc 24

210 417

211 24

212 DNA

213 Artificial Sequence

220

223 Synthetic oligonucleotide probe

240 417

gttaagacat gctccagag gtgc 24

210 418

211 50

212 DNA

213 Artificial Sequence

220

223 Synthetic oligonucleotide probe

240 418

gttaagacat gctccagag gtgc 24

210 419

211 1037

212 DNA

213 Homo sapiens

240 429

gttaagacat gctccagag gtgc 24

gttaagacat gctccagag gtgc 24

gttaagacat gctccagag gtgc 24

gttaagacat gctccagag gtgc 24

gttaagacat gctccagag gtgc 24

gttaagacat gctccagag gtgc 24

ottgcaccat gtttgagctc atcatctttg aaatcttagg agtattgaat 350
agcagctccc gttattttca ctggaaaatg aacctgtgtg taattctgct 400
gacctgggtt ttcatgggtg ctctttacat tggctatctt attgtgagca 450
atatacgaat actgcataaa caacgaactg tttttctctg tctcttatgg 500
ctgaccttta tgtattctct ctggaaaacta ggagatccct tctccattct 550
cagccccaaa catgggcatct tatccataga acagctcact agccgggttg 600
gtgtgattgg agtgactctc atggctcttc tttctggatt tgggtctgtc 650
aactgcaccat acaattacat gtcttacttc ctacaggaatg tgaatgacac 700
ggatattcta gccctggaaac ggcgactgct gcaaacccatg gatatgacac 750
caagcaaaaa gaaaaggatg gcaatggcac ggagaacacat gttccagaag 800
ggggaagtgc ataacaaaac atcaggtctc tggggaatga taaaaagtgt 850
taccacttca gcatacggaa gtgaaaatct tactcttatt caacaggaag 900
tggatgcttc ggaagaatta agcagggcagc tttttctgga aacagctgat 950
ctatatgcta ccaaggagag aatagaatac tccaaaacct tcaaggggaa 1000
atattttaat tttcttgggt acctttcttc tatttactgt gtttggaaaa 1050
ttttcatgga taccatcaat attgtttttg atcgagtctg gaaaacggat 1100
cctgtcacaa gaggcattga gatcactgtg aattatctgg gaatccaact 1150
tgatgtgaag ttttggctcc aacacatttc ctccattctt gttggaaata 1200
tcctcgtcac atccatcaga ggattgtga tcactcttac caagtctctt 1250
tatgcacatc ctagcagtaa gtctccaat gtcattgtcc tgcattagc 1300
acagataatg ggcattgact ttgtctcttc tgtgtgtctg atccgaatga 1350
gtatgccttc agaataccgc accataatca ctgaagtctt tggagaactg 1400
cagttcaact tctatccacg ttggcttgat gtgatcttcc tggtcagcgc 1450
ctctctcagc atactcttcc tctatttggc tcacaaaacag gcaccagaga 1500
agcaaatggc accttgaact taagcctact acagactgtt agaggccagt 1550
ggtttcaaaa tttagatata agagggggga aaaatggaaac cagggcctga 1600
cattttataa acaaacaaaa tgcctatggta gcatttttca ccttcatagc 1650
atactcttc cccgtcaggt gatactatga ccatgagtag catcagccag 1700

aacatgagag ggagaactaa ctcaagacaa tactcagcag agagcatccc 1750
 gtgtggatat gaggotgggtg tagaggcpgga gaggagccaa gaaactaaag 1800
 ctgaaaaata cactggaaact ctgggggcaag acatgtctat ggtagctgag 1850
 ccaaaacagt aggatttccg ttttaagggt cacatggaaa aggttatagc 1900
 ttgacctga gattgactca ttaaaatcag agactgtaac aaaaaaaaaa 1950
 aaaaaaaaaa agggggggcg cgactctaga gtgcacctgc agaagcttgg 2000
 ccgcacatggc ccaacttggt tattgcagct tataatg 2037

<110> 430
 <111> 455
 <112> PRT
 <113> Homo sapiens

<400> 430
 Met Ser Phe Leu Ile Asp Ser Ser Ile Met Ile Thr Ser Gln Ile
 1 5 10 15
 Leu Phe Phe Gly Phe Gly Trp Leu Phe Phe Met Arg Gln Leu Phe
 20 25 30
 Lys Asp Tyr Glu Ile Arg Gln Tyr Val Val Gln Val Ile Phe Ser
 35 40 45
 Val Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Phe
 50 55 60
 Glu Ile Leu Gly Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp
 65 70 75
 Lys Met Asn Leu Cys Val Ile Leu Leu Ile Leu Val Phe Met Val
 80 85 90
 Pro Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu
 95 100 105
 His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe
 110 115 120
 Met Tyr Phe Phe Trp Lys Leu Gly Asp Pro Phe Pro Ile Leu Ser
 125 130 135
 Pro Lys His Gly Ile Leu Ser Ile Glu Gln Leu Ile Ser Arg Val
 140 145 150
 Gly Val Ile Gly Val Thr Leu Met Ala Leu Leu Ser Gly Phe Gly
 155 160 165
 Ala Val Asn Cys Pro Tyr Thr Tyr Met Ser Tyr Phe Leu Arg Asn
 170 175 180
 Val Thr Asp Thr Asp Ile Leu Ala Leu Glu Arg Arg Leu Leu Gln

	185	190	195
Thr Met Asp Met	Ile Ile Ser Lys Lys	Lys Arg Met Ala Met	Ala
	200	205	210
Arg Arg Thr Met	Phe Gln Lys Gly Glu	Val His Asn Lys Pro	Ser
	215	220	225
Gly Phe Trp Gly	Met Ile Lys Ser Val	Thr Thr Ser Ala Ser	Gly
	230	235	240
Ser Glu Asn Leu	Thr Leu Ile Gln Gln	Glu Val Asp Ala Leu	Glu
	245	250	255
Glu Leu Ser Arg	Gln Leu Phe Leu Glu	Thr Ala Asp Leu Tyr	Ala
	260	265	270
Thr Lys Glu Arg	Ile Glu Thr Ser Lys	Thr Phe Lys Gly Lys	Tyr
	275	280	285
Phe Asn Phe Leu	Gly Tyr Phe Phe Ser	Ile Tyr Cys Val Trp	Lys
	290	295	300
Ile Phe Met Ala	Thr Ile Asn Ile Val	Phe Asp Arg Val Gly	Lys
	305	310	315
Thr Asp Pro Val	Thr Arg Gly Ile Glu	Ile Thr Val Asn Tyr	Leu
	320	325	330
Gly Ile Gln Phe	Asp Val Lys Phe Trp	Ser Gln His Ile Ser	Phe
	335	340	345
Ile Leu Val Gly	Ile Ile Ile Val Thr	Ser Ile Arg Gly Leu	Leu
	350	355	360
Ile Thr Leu Thr	Lys Phe Phe Tyr Ala	Ile Ser Ser Ser Lys	Ser
	365	370	375
Ser Asn Val Ile	Val Leu Leu Leu Ala	Gln Ile Met Gly Met	Tyr
	380	385	390
Phe Val Ser Ser	Val Leu Leu Ile Arg	Met Ser Met Pro Leu	Glu
	395	400	405
Tyr Arg Thr Ile	Ile Thr Glu Val Leu	Gly Glu Leu Gln Phe	Asn
	410	415	420
Phe Tyr His Arg	Trp Phe Asp Val Ile	Phe Leu Val Ser Ala	Leu
	425	430	435
Ser Ser Ile Leu	Phe Leu Tyr Leu Ala	His Lys Gln Ala Pro	Glu
	440	445	450
Lys Gln Met Ala	Pro		
	455		

<210> 431

<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 78, 31, 113, 157, 224, 297
<223> unknown base

<400> 431
atggggaagt ggagcgggag ccttccttac actcgccatg agtttctcca 50
tcgactccag catcatgatt acctccnga naactattttt tggatttggg 100
tggcttttct tcnnggccaa tgtttaaaga ctatgagata cgtcagtatg 150
ttgtacaggt gatctctctc gtgacgtttg ccattctctg caccatgttt 200
gactccatca tctttgaaat cctnnggagta ttgaatagca gctcccgtaa 250
ttttcactgg aaaatgaacc tgtgtgtaat tctgctgata ctgggtttca 300
tgggtccttc ttacattggc tattttattg tgagcaatat ccgactactg 350
cataaacaac gactgccttt tctctgtctc ttatggctga cctttatgta 400
tttcag 407

<210> 432
<211> 457
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 66, 31-32, 34, 122, 184, 137, 232, 241, 400, 414, 427, 434
<223> unknown base

<400> 432
gtgtttgcct tggggagggg aaggggagcc nggcctcttc ctaaaaatttg 50
gcacaagggt tctttnttga attccgggtt nngnatacct tcccagaaaa 100
tattttttgg atttggggta gnttttttcc atgogccaat tgtttaaaga 150
ctatgagata cgtcagtatg ttgtacaggt gatnttntcc gtgacgtttg 200
cattttcttg caccatgttc gagctcatca tntttgaaat nttagggagta 250
ttgaatagca gctcccgtaa ttttcactgg aaaatgaacc tgtgtgtaat 300
tctgctgata ctgggtttca tgggtccttc ttacattggc tattttactg 350
tgagcaatat ccgactactg cataaacaac gactgccttt tctctgtctn 400
ttatggctga cctttatgta tttntnttgg aaantaggag atccctttcc 450

gattctc 457

<210> 433

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 433

aaatggagcc ggagcttcc 20

<210> 434

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 434

tcattgatta tgcagtagtc gg 22

<210> 435

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 435

attgtttaaa gactatgaga taagtcagta tgttgtacag g 41

<210> 436

<211> 3451

<212> DNA

<213> Homo sapiens

<400> 436

cttcgcgcagg gatcgtccca tggccggggc toggagccgc gacccctggg 50

gggcctccgg gatttgcac ctttttgggt cctgtctcgt cgaactgctc 100

ttctcagggg ctgtgcctt caatctggac gtgatgggtg ccttgcccaa 150

ggaggjcgag ccagggagcc tcttcggctt ctctgtggcc ctgcaccggc 200

agttgcagcc ccgacccag agctggctgc tgggtgggtgc tccccaggcc 250

ctggctcttc ctgggcagca ggagaatgc aactggaggcc tcttcgcttg 300

cccttgagc ctggaggaga ctgactgcta cagagtggac atcgaccagg 350

gagctgatat gcaaaaggaa agcaaggaga accagtgggt gggagtcagt 400

gttcggagcc aggggocctgg yggcaagatt gttacctgtg cacacccgata 450
 tgaggcaagg cagcgagtgg accagatcct ggagacgggg gatatgattg 500
 gtccctgctt tctgctcagg caggacctgg ccatccggga tgagtccgat 550
 ggtggggaat ggaagtctct tgagggagcg ccccaaggcc atgaacaatt 600
 tgggtctctg cagcagggga cagctgcggc cttctccctt gatagccact 650
 accctctctt tggggcccca ggaacctata attggaaggg caccggccagg 700
 gtggagctct gtgcacaggg ctccagggac ctggccacac tggacgacgg 750
 tccctacgag ggggggggag agaaggagca ggaaccccg ctcctccgg 800
 tccctgcaca cagctacttt ggctctctta ttgactcggg gaaaggctct 850
 gtgggtgag aagagctgag ctttctgggt ggagccccc ggcaccaaca 900
 caaggtgct gtggtcctcc tggcgaagg cagggccagt ccctgggtg 950
 ccgaggttat gctgtctggg gagcgccctga cctccggctt tggctactca 1000
 ctggctgttg ctgaacctaa cagtgatggc tggccagacc tgatagtggg 1050
 tgcacctac cttcttgagg gccaagaaga gctggggggg gctgtgtatg 1100
 tctacttgaa ccaggggggt cactgggttg gcatctccc cctccgggtc 1150
 tgggtctccc ctgactccat gttcgggctc agcctggctg cctgggggga 1200
 cctcaaacaa gatggcttcc cagatattgc agtgggtgoc ccccttgatg 1250
 gtgatgggaa agtcttcctc taccatggga gcagcctggg ggttgtcgcc 1300
 aaacctcac aggtgttgga gggcgagggt gtgggcatca agagcttcgg 1350
 ctactccctg ccaggcagct tggatatgga tgggaaccaa taccctgacc 1400
 tctgtgtggg ctccctgggt gacacggcag tctcttcag ggcagaccc 1450
 atctctcatg tctcccatga ggtctctatt gctccacgaa gcatcgacct 1500
 ggagcagccc aactgtgttg ggggcacctc ggtctgtgtg gacctaaagg 1550
 cctgttccag ctacattgca gtcccagca gctatagccc tactgtggcc 1600
 ctggactatg cgttagatgc ggaacagac cggaggctcc ggggcacggc 1650
 tcccgtgtg acgttctga gcctgaacct ggaagaaccc aagcaccagg 1700
 cctcgggac cgtgtggctg aagcaccagc atgaccagct cctgtggagc 1750
 gccatgttcc agctccagga aaatgtcaaa gacaagcttc gggccattgt 1800
 agtgacctg tctacagtc tccagacccc tcggctccgg ccacaggctc 1850

ctggccaggg gctgcctcca gtggccccc cctccaatgc ccaaccagccc 1300
 agcaccagc gggcagagat ccacttcctg aagcaaggct gtggtgaaga 1350
 caagatctgc cagagcaatc tgcagctggg ccacgcccgc ttctgtacc 1400
 gggccagcga caccgaattc caacctctgc ccctggatgt ggatgggaac 1450
 acagccctgt ttgcactgag tgggcagcca gtcattggcc tggagctgat 1500
 ggtcaccacc ctgcactgg acccagccca gcccaggct gatgggggat 1550
 atgcccata agcccagctc ctgggtcctg ttcctgaatc actgcactac 1600
 tcaggggtcc gggccctgga cctcgaggag aagccactct gctgtccaa 1650
 tgagaatgcc tcccatgttg agtgtgagct ggggaacccc atgaagagag 1700
 gtgcccaggt cactctctac ctcatcctta gcacctccgg gatcagcatt 1750
 gagaccagg aactggaggt agagctgtct tggccacga tcagtgaaga 1800
 ggagctgcac ccagtctctg ccagagcccg tgtcttcatt gagctgccc 1850
 tgtccattgc aggaatggcc attcccccag aactctcttc cctgggggtg 1900
 gtgagggggc agagagccat gcagctcgag cgggatgtgg gcagcaagg 1950
 caagtatgag gtcacgggtt ccaaccagg ccagtcgctc agaaccctgg 2000
 gctctgcctt cctcaacatc atgtggcctc atgagattgc caatgggaag 2050
 tgggtgtctg acccaatgca ggttgagctg gagggcgggc aggggcctgg 2100
 gcagaaaggg ctttgtcttc ccaggcccaa catctccac ctggatgtgg 2150
 acagtaggga taggaggcgg cgggagctgg agccacctga gcagcaggag 2200
 cctggtgagc ggcaggagcc cagcatgtcc tggcggccag tgtccctctg 2250
 tgagaagaag aaaaacatca cctggactg cggccggggc accgccaact 2300
 gtgtgggtgt cagctgccc cctacagct ttgacgggc ggtgtgtctg 2350
 catgtctggg gcgtctctg gaacagcacc tttctggagg agtactcag 2400
 tgtgaagtcc ctggaagtga ttgtccgggc caacatcaca gtgaagtcc 2450
 ccataaagaa cttgatgtct cgagatgctt ccacagtgat ccagtgatg 2500
 gtataactgg accccatggc tgtggcggca gaaggagtgc cctggcgggt 2550
 catcctctg gctgtactgg ctgggtgtgt ggtgtagca ctgtcgggc 2600
 tgtctctgt gaagatggga ttcttcaaac gggcgaagca ccccgaggcc 2650

accgtgcccc agtaccatgc ggtgaagatt cctggggaag accgacagca 3301
 attcaaggag gagaagacgg gcaccatcct gaggaacaac tggggcagcc 3350
 cccgggggga gggcccgcat gcacacccca cctgggtgc tgacgggcat 3400
 ccctagctgg gcccggatgg gcacccaggg ccaggccagg cctaggttcc 3450
 catgtcccag cctgggctgt ggtgcccctc cacccttcc ccagagatgg 3500
 ctcttgggga tgaagagggc agagtgggct gctgggtgtg catcaagatt 3550
 tggcaggatc ggttccctca ggggcacaga cctctcccac ccacaagaac 3600
 tctcccaccc caacttccc ttagagtgt gtgagatgag agtgggtaaa 3650
 tcaaggacag ggcctgggg tagggtgaga agggcagggg tgtcctgatg 3700
 caaaggtggg gagaaggcat cctaaccct cctctccca ttcacctgt 3750
 ctaccaggac cccaaggacc tgcctcccg gaagtgcctt aacctagagg 3800
 gtcggggagg aggttgtgtc actgactcag gctgctcctt ctctagtctc 3850
 cccctccatc tgaccttagt ttgctgcat cagtctagt gtttctgggt 3900
 ctgtctatt tattaaaaaa ccttgagaa caaaaaaaaa aaaaaaaaaa 3950

a 3951

0010 - 417
 0011 - 1141
 0012 - PRT
 0013 - Homo sapiens

0000 - 417
 Met Ala Gly Ala Arg Ser Arg Asp Pro Trp Gly Ala Ser Gly Ile
 1 5 10 15
 Cys Tyr Leu Phe Gly Ser Leu Leu Val Gln Leu Leu Phe Ser Arg
 20 25 30
 Ala Val Ala Phe Asn Leu Asp Val Met Gly Ala Leu Arg Lys Gln
 35 40 45
 Gly Glu Pro Gly Ser Leu Phe Gly Phe Ser Val Ala Leu His Arg
 50 55 60
 Gln Leu Gln Pro Arg Pro Gln Ser Trp Leu Leu Val Gly Ala Pro
 65 70 75
 Gln Ala Leu Ala Leu Pro Gly Gln Gln Ala Asn Arg Thr Gly Gly
 80 85 90
 Leu Phe Ala Cys Pro Leu Ser Leu Glu Gln Thr Asp Cys Tyr Arg
 95 100 105

Val Asp Ile Asp	Gln Gly Ala Asp Met	Gln Lys Glu Ser Lys Glu	110	115	120
Asn Gln Trp Leu	Gly Val Ser Val Arg	Ser Gln Gly Pro Gly Gly	125	130	135
Lys Ile Val Thr	Cys Ala His Arg Tyr	Glu Ala Arg Gln Arg Val	140	145	150
Asp Gln Ile Leu	Glu Thr Arg Asp Met	Ile Gly Arg Cys Phe Val	155	160	165
Leu Ser Gln Asp	Leu Ala Ile Arg Asp	Glu Leu Asp Gly Gly Glu	170	175	180
Trp Lys Phe Cys	Glu Gly Arg Pro Gln	Gly His Glu Gln Phe Gly	185	190	195
Phe Cys Gln Gln	Gly Thr Ala Ala Ala	Phe Ser Pro Asp Ser His	200	205	210
Tyr Leu Leu Phe	Gly Ala Pro Gly Thr	Tyr Asn Trp Lys Gly Thr	215	220	225
Ala Arg Val Glu	Leu Cys Ala Gln Gly	Ser Ala Asp Leu Ala His	230	235	240
Leu Asp Asp Gly	Pro Tyr Glu Ala Gly	Gly Glu Lys Glu Gln Asp	245	250	255
Pro Arg Leu Ile	Pro Val Pro Ala Asn	Ser Tyr Phe Gly Phe Ser	260	265	270
Ile Asp Ser Gly	Lys Gly Leu Val Arg	Ala Glu Glu Leu Ser Phe	275	280	285
Val Ala Gly Ala	Pro Arg Ala Asn His	Lys Gly Ala Val Val Ile	290	295	300
Leu Arg Lys Asp	Ser Ala Ser Arg Leu	Val Pro Glu Val Met Leu	305	310	315
Ser Gly Glu Arg	Leu Thr Ser Gly Phe	Gly Tyr Ser Leu Ala Val	320	325	330
Ala Asp Leu Asn	Ser Asp Gly Trp Pro	Asp Leu Ile Val Gly Ala	335	340	345
Pro Tyr Phe Phe	Glu Arg Gln Glu Glu	Leu Gly Gly Ala Val Tyr	350	355	360
Val Tyr Leu Asn	Gln Gly Gly His Trp	Ala Gly Ile Ser Pro Leu	365	370	375
Arg Leu Cys Gly	Ser Pro Asp Ser Met	Phe Gly Ile Ser Leu Ala	380	385	390

Val	Leu	Gly	Asp	Leu	Asn	Gln	Asp	Gly	Phe	Pro	Asp	Ile	Ala	Val	
				395					400					405	
Gly	Ala	Pro	Phe	Asp	Gly	Asp	Gly	Lys	Val	Phe	Ile	Tyr	His	Gly	
				410					415					420	
Ser	Ser	Leu	Gly	Val	Val	Ala	Lys	Pro	Ser	Gln	Val	Leu	Glu	Gly	
				425					430					435	
Glu	Ala	Val	Gly	Ile	Lys	Ser	Phe	Gly	Tyr	Ser	Leu	Ser	Gly	Ser	
				440					445					450	
Leu	Asp	Met	Asp	Gly	Asn	Gln	Tyr	Pro	Asp	Leu	Leu	Val	Gly	Ser	
				455					460					465	
Leu	Ala	Asp	Thr	Ala	Val	Leu	Phe	Arg	Ala	Arg	Pro	Ile	Leu	His	
				470					475					480	
Val	Ser	His	Glu	Val	Ser	Ile	Ala	Pro	Arg	Ser	Ile	Asp	Leu	Glu	
				485					490					495	
Gln	Pro	Asn	Cys	Ala	Gly	Gly	His	Ser	Val	Cys	Val	Asp	Leu	Arg	
				500					505					510	
Val	Cys	Phe	Ser	Tyr	Ile	Ala	Val	Pro	Ser	Ser	Tyr	Ser	Pro	Thr	
				515					520					525	
Val	Ala	Leu	Asp	Tyr	Val	Leu	Asp	Ala	Asp	Thr	Asp	Arg	Arg	Leu	
				530					535					540	
Arg	Gly	Gln	Val	Pro	Arg	Val	Thr	Phe	Leu	Ser	Arg	Asn	Leu	Glu	
				545					550					555	
Glu	Pro	Lys	His	Gln	Ala	Ser	Gly	Thr	Val	Irp	Leu	Lys	His	Gln	
				560					565					570	
His	Asp	Arg	Val	Cys	Gly	Asp	Ala	Met	Phe	Gln	Leu	Gln	Glu	Asn	
				575					580					585	
Val	Lys	Asp	Lys	Leu	Arg	Ala	Ile	Val	Val	Thr	Leu	Ser	Tyr	Ser	
				590					595					600	
Leu	Gln	Thr	Pro	Arg	Leu	Arg	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
				605					610					615	
Pro	Pro	Val	Ala	Pro	Ile	Leu	Asn	Ala	His	Gln	Pro	Ser	Thr	Gln	
				620					625					630	
Arg	Ala	Glu	Ile	His	Phe	Leu	Lys	Gln	Gly	Cys	Gly	Glu	Asp	Lys	
				635					640					645	
Ile	Cys	Gln	Ser	Asn	Leu	Gln	Leu	Val	His	Ala	Arg	Phe	Cys	Thr	
				650					655					660	
Arg	Val	Ser	Asp	Thr	Glu	Phe	Gln	Pro	Leu	Pro	Met	Asp	Val	Asp	
				665					670					675	

Gly Thr Thr Ala	Leu Phe Ala Leu Ser	Gly Gln Pro Val Ile Gly	680	685	690
Leu Glu Leu Met	Val Thr Asn Leu Pro	Ser Asp Pro Ala Gln Pro	695	700	705
Gln Ala Asp Gly	Asp Asp Ala His Glu	Ala Gln Leu Leu Val Met	710	715	720
Leu Pro Asp Ser	Leu His Tyr Ser Gly	Val Arg Ala Leu Asp Pro	725	730	735
Ala Glu Lys Pro	Leu Cys Leu Ser Asn	Glu Asn Ala Ser His Val	740	745	750
Glu Cys Glu Leu	Gly Asn Pro Met Lys	Arg Gly Ala Gln Val Thr	755	760	765
Phe Tyr Leu Ile	Leu Ser Thr Ser Gly	Ile Ser Ile Glu Thr Thr	770	775	780
Glu Leu Glu Val	Glu Leu Leu Leu Ala	Thr Ile Ser Glu Gln Glu	785	790	795
Leu His Pro Val	Ser Ala Arg Ala Arg	Val Phe Ile Glu Leu Pro	800	805	810
Leu Ser Ile Ala	Gly Met Ala Ile Pro	Gln Gln Leu Phe Phe Ser	815	820	825
Gly Val Val Arg	Gly Glu Arg Ala Met	Gln Ser Glu Arg Asp Val	830	835	840
Gly Ser Lys Val	Lys Tyr Glu Val Thr	Val Ser Asn Gln Gly Gln	845	850	855
Ser Leu Arg Thr	Leu Gly Ser Ala Phe	Leu Asn Ile Met Trp Pro	860	865	870
His Glu Ile Ala	Asn Gly Lys Trp Leu	Leu Tyr Pro Met Gln Val	875	880	885
Glu Leu Glu Gly	Gly Gln Gly Pro Gly	Gln Lys Gly Leu Cys Ser	890	895	900
Pro Arg Pro Asn	Ile Leu His Leu Asp	Val Asp Ser Arg Asp Arg	905	910	915
Arg Arg Arg Glu	Leu Glu Pro Pro Glu	Gln Gln Glu Pro Gly Glu	920	925	930
Arg Gln Glu Pro	Ser Met Ser Trp Trp	Pro Val Ser Ser Ala Glu	935	940	945
Lys Lys Lys Asn	Ile Thr Leu Asp Cys	Ala Arg Gly Thr Ala Asn	950	955	960

Cys Val Val Phe Ser Cys Pro Leu Tyr Ser Phe Asp Arg Ala Ala
965 970 975

Val Leu His Val Trp Gly Arg Leu Trp Asn Ser Thr Phe Leu Glu
980 985 990

Glu Tyr Ser Ala Val Lys Ser Leu Glu Val Ile Val Arg Ala Asn
995 1000 1005

Ile Thr Val Lys Ser Ser Ile Lys Asn Leu Met Leu Arg Asp Ala
1010 1015 1020

Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val
1025 1030 1035

Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu
1040 1045 1050

Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Leu Trp Lys
1055 1060 1065

Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro
1070 1075 1080

Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe
1085 1090 1095

Lys Gln Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser
1100 1105 1110

Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp
1115 1120 1125

Gly His Pro Glu Leu Gly Pro Asp Gly His Pro Gly Pro Gly Thr
1130 1135 1140

Ala

<210> 438

<211> 24

<212> DNA

<213> Artificial Sequence

<214>

<215> Synthetic oligonucleotide probe

<220> 438

ggatggacacc gtagtgctct tcag 24

<221> 439

<222> 24

<223> DNA

<224> Artificial Sequence

<225>

<226> Synthetic oligonucleotide probe

4100 + 439

gtgtgtgggg actgcaatgt agct 24

4110 + 440

4111 + 46

4112 + DNA

4113 + Artificial Sequence

4120 +

4121 + Synthetic oligonucleotide probe

4410 + 440

aatctccat gtctcccatg aggtctctat tctccacga agcctc 46

4410 + 441

4411 + 1964

4412 + DNA

4413 + Homo sapiens

4410 + 441

ccgacccaggc gcagggagct gactggacgg ctgagacgg cggcggtgc 50

agcagctcca gaaagcagcg agttggcaga gcagggctgc atttccagca 100

gactctgga gcacagtctt ggtccacaac aagatgctca aggtgtcagc 150

gttactgtgt gtgtgtgag cggcttgggt cagtcagtct ctgcagctg 200

cgggggggt ggtgcagcc ggggggggtt cggacggcg taattttctg 250

gctgataaac aatggctcac cacaatctct cagtatgaca aggaagtggg 300

acagtggaac aaattccag acgaagtaga gcatgattat ttccgcactt 350

ggagtccagg aaaaaccttc gatcaggctt tagatccagc taaggatcca 400

tgcttaaga tgaaatgtag tggccataaa gtatgcattg ctcaagattc 450

tcagactgca gtctgcatta gtcacggag gttacacac aggatgaaag 500

aagca gtagt agaccatagg cagtggaggg gtcccatatt atccacctgc 550

aggcagtgc cagtggctta tcccagcctt gtttgtggtt cagatggctc 600

tacctaactt ttccagtcca aactagaata tcaggcatgt gtcttaggaa 650

aacagatctc agtcaaatgt gaaggacatt gccatgtcc ttccagataag 700

cccacacagta caagcagaaa tgttaagaga gcattgcagt accctggagtt 750

cagggaagtg gcaaacagat tgogggactg gttcaaggcc ctccatgaaa 800

gtggaagtca aaacaagaag acaaaaaacat tgctgaggcc tgagagaagc 850

agattcgata ccagcatctt gccaatctgc aaggactcac ttggttggt 900

gtttaacaga cttgatacaa actatgacct gctattggac cagtcagaga 950
 toagaagcat ttaccttgat aagaatgaac agtgtaccaa ggcattcttc 1000
 aattctcttg acacatacaa ggacagttta atatctaata atgagtgggtg 1050
 ctactgcttc cagagacaga aagaccacc ttgcacagact gagctcagca 1100
 atattcagaa ggggcaaggg gtaaagaagc tcttaggaca gtatatccc 1150
 ctgtgtgatg aagatgggta ctacaagcca acacaatgtc atggcaggtg 1200
 tggacagtgc tgggtgtgtg acagatatgg aaatgaagtc atgggaccca 1250
 gaataaatgg tgttcagat tgtgctatag attttgagat ctccggagat 1300
 tctgtagtgc ggcattttca tgaatggact gatgatgagg atgatgaaga 1350
 cgalattatg aatgatgaag atgaaattga agatgatgat gaagatgaag 1400
 gggatgatga tpatgggtgt gatgaccatg atgtatacat ttgattgatg 1450
 acagttgaaa tcaataaatt ctacattctt aatatttaca aaaatgatag 1500
 cctttttaa attatctctt tccccaatca caaaatgatt ctaaaacctca 1550
 caatatttt gtataattat ttgaaaaatt gcagctaaag ctatagaact 1600
 tcatgtttta ataagaatca ttgtcttga gtttttatat tcttcacaca 1650
 aaaagaaaat acatatgcag tctagtcaga caaaataaag ttttgaagtg 1700
 ctactataat aaatttttca cgagaacaaa ctttgtaaat ctcccataag 1750
 caaaatgaca gctagtgttt gggatgttac atgttaattt tttgaaagat 1800
 aattctaagt gaaattttaa ataaataaat ttttaatgac ctgggtctta 1850
 aggtatttagg aaaaatatgc atgctttaat tgcatttcca aagtagcctc 1900
 ttgttagacc tagatgagtc aggataacag agagatacca catgactcca 1950
 aaaaaaaaaa aaaa 1964

<210> 442
 <211> 436
 <212> PET
 <213> Homo sapiens

<400> 442
 Met Leu Lys Val Ser Ala Val Leu Cys Val Cys Ala Ala Ala Trp
 1 5 10 15
 Cys Ser Gln Ser Leu Ala Ala Ala Ala Val Ala Ala Ala Gly
 20 25 30
 Gly Arg Ser Asp Gly Gly Asn Phe Leu Asp Asp Lys Gln Trp Leu

	25		41		45
Thr Thr Ile Ser	Gln Tyr Asp Lys Glu Val Gly Gln Trp Asn Lys				
	50		55		60
Phe Arg Asp Glu Val	Glu Asp Asp Tyr Phe Arg Thr Trp Ser Pro				
	65		70		75
Gly Lys Pro Phe Asp	Gln Ala Leu Asp Pro Ala Lys Asp Pro Cys				
	80		85		90
Leu Lys Met Lys Cys	Ser Arg His Lys Val Cys Ile Ala Gln Asp				
	95		100		105
Ser Gln Thr Ala Val	Cys Ile Ser His Arg Arg Leu Thr His Arg				
	110		115		120
Met Lys Glu Ala Gly	Val Asp His Arg Gln Trp Arg Gly Pro Ile				
	125		130		135
Leu Ser Thr Cys Lys	Gln Cys Pro Val Val Tyr Pro Ser Pro Val				
	140		145		150
Cys Gly Ser Asp Gly	His Thr Tyr Ser Phe Gln Cys Lys Leu Glu				
	155		160		165
Tyr Gln Ala Cys Val	Leu Gly Lys Gln Ile Ser Val Lys Cys Glu				
	170		175		180
Gly His Cys Pro Cys	Pro Ser Asp Lys Pro Thr Ser Thr Ser Arg				
	185		190		195
Asn Val Lys Arg Ala	Cys Ser Asp Leu Glu Phe Arg Glu Val Ala				
	200		205		210
Asn Arg Leu Arg Asp	Trp Phe Lys Ala Leu His Glu Ser Gly Ser				
	215		220		225
Gln Asn Lys Lys Thr	Lys Thr Leu Leu Arg Pro Glu Arg Ser Arg				
	230		235		240
Phe Asp Thr Ser Ile	Leu Pro Ile Cys Lys Asp Ser Leu Gly Trp				
	245		250		255
Met Phe Asn Arg Leu	Asp Thr Asn Tyr Asp Leu Leu Leu Asp Gln				
	260		265		270
Ser Gln Leu Arg Ser	Ile Tyr Leu Asp Lys Asn Glu Gln Cys Thr				
	275		280		285
Lys Ala Phe Phe Asn	Ser Cys Asp Thr Tyr Lys Asp Ser Leu Ile				
	290		295		300
Ser Asn Asn Glu Trp	Cys Tyr Cys Phe Gln Arg Gln Gln Asp Pro				
	305		310		315
Pro Cys Gln Thr Glu	Leu Ser Asn Ile Gln Lys Arg Gln Gly Val				

320					325					330				
Lys	Lys	Leu	Leu	Gly	Gln	Tyr	Ile	Pro	Leu	Cys	Asp	Glu	Asp	Gly
				335					340					345
Tyr	Tyr	Lys	Pro	Thr	Gln	Cys	His	Gly	Ser	Val	Gly	Gln	Cys	Trp
				350					355					360
Cys	Val	Asp	Arg	Tyr	Gly	Asn	Glu	Val	Met	Gly	Ser	Arg	Ile	Asn
				365					370					375
Gly	Val	Ala	Asp	Cys	Ala	Ile	Asp	Phe	Glu	Ile	Ser	Gly	Asp	Phe
				380					385					390
Ala	Ser	Gly	Asp	Phe	His	Glu	Trp	Thr	Asp	Asp	Glu	Asp	Asp	Glu
				395					400					405
Asp	Asp	Ile	Met	Asn	Asp	Glu	Asp	Glu	Ile	Glu	Asp	Asp	Asp	Glu
				410					415					420
Asp	Gln	Gly	Asp	Asp	Asp	Asp	Gly	Gly	Asp	Asp	His	Asp	Val	Tyr
				425					430					435

115

<211> 443
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<214>
 <215> Synthetic oligonucleotide probe

<440> 443
 caacactatt cagaagcggc aaggg 25

<216> 444
 <216> 18
 <217> DNA
 <218> Artificial Sequence

<219>
 <220> Synthetic oligonucleotide probe

<440> 444
 catcatggtc atcaacacaa tcatcacc 23

<221> 445
 <221> 48
 <222> DNA
 <223> Artificial Sequence

<224>
 <225> Synthetic oligonucleotide probe

<440> 445

ggttactaca agccaacaca atgtcatggc agtggtggac agtgctgg 48

(210): 446

(211): 3617

(212): DNA

(213): Homo sapiens

(40): 446

cagactccag atttccctgt caaccacgag gactccagag aggaaaacgg 50

gagcggagac aacagtaact gacgcctctt tcagcccggg atcgccccag 100

cagggatggg cgacaagatc tggctgacct tcccgttgtt cctttctggc 150

gctctgcctc cggctgttgt gctgggggg ggccgcttca cactttccct 200

cgatagcgac ttacacttta cctttcccg cggccagaag gactgcttct 250

accagcccat gcccctgaag gctcgctgg agatcgagta ccaagtttta 300

gatggagcag gattagatat tgatttccat ctgaccttc cagaaggcaa 350

aaccttagtt ttgaacaaa gaaaatcaga tggagttcac actgtagaga 400

ctgaagtggg tgattacatg ttctgctttg acaatacatt cagcaccatt 450

ctcgagaagg tgattttctt tgaattaatc ctggataata tgggagaaca 500

ggcccaagaa caagaagatt ggaagaaata tattaatggc acagatatat 550

tggatatgaa actggaagac atctgggaat ccacaaacag catcaagtcc 600

agactaagca aaagtgggca catacaaatc ctgcttagag catttgaagg 650

tggtagatga aacatacaag aaagcaactt tgatagagtc aattctctgg 700

ctatgggttaa tttagtggtc atgggtgggg tgcagccat tcaagtttat 750

atgctgaaga gtctgtttga agataagagg aaaagttaga cttaaaaact 800

caactagag tacgtaacat tgaaaaatga ggcataaaaa tgcataaac 850

tgttacagtc aagaccatta atggtcttct ccaaaatatt ttgagatata 900

aaagtajgaa acaggtataa ttttaatgtg aaaattaagt cttcacttcc 950

tgtgcaagta atcctgtctg tcagttctga ctttaagtgt taacagggaat 1000

attttcgaga atataggttt aactgaatga agccatatta ataactgcct 1050

tttcctaact ttgaaaaatt ttgcaaatgt cttaggtgat ttaaataaat 1100

gagtatggg cctaattgca acaccagttt gtttttaaca ggtcttatta 1150

cccagaactt ttttgtaaat ggggcagtta caaattaact gtggaagttt 1200

tcagttttta gttataaatc acctgagaat tacctaataa tggattgaat 1250

aaatcttttag actacaaaag cccaactttt ctctatttac atatgcatct 1300
ctccataaat gtaaatagaa taatagcttt gaaatacaat taggtctttg 1350
agatcttttat aaccaaatat atttcagtgt aacatattag cagaaagcat 1400
tagtctttgt actttgctta cattccaaa agctgacatt ttacgatto 1450
ttaaaaaaac aaagttacac ttactaaaat taggacatgt tttctctttg 1500
aaatgaagaa tatagtttaa aagcttcctc ctccataggg acacattttc 1550
tctaaccttt aactaaagtg taggatttta aaattaaatg tgaggtaaaa 1600
taagtcttatt tttaatagta ctgttcaagt taatatctgt caacagttaa 1650
caatcatgtt atgttaactt caacatgatt gctgacttgg ataattcatt 1700
attaccagca gttatgaagg aaatattgct aaaatgatct gggctacca 1750
taataaataa ctctcttttc tgagctctaa gaattatcag aaaacaggaa 1800
agaattttaga aaaacttgag aaaacctaat ccaaaataaa attcacttaa 1850
gtagaactat aaataaatat ctagaactct actggctcat catgacatcc 1900
tactcataac ataaatcaaa ggagatgatt aatttcacgt tagctggaag 1950
aaaactttggc tgtaggtttt tattttctac aagaattctg gtttgaatta 2000
cttttgtaag caggtacatt ttataaaatg taagccctac tgttaaggttc 2050
agcactgggt gtacatattt attaaaaatt tttattataa caacttttat 2100
taaaatgggc tttctgaaca ctctatttat tgatgttgaa gtaaggatta 2150
gaaacataga ctcccaagtt ttaaacacct aaatgtgaat aacccatata 2200
tacaacaaag tttctgcat ctactcttt gaagctctat ggggtcttac 2250
tcaagtacta gtaatttaac ttcatcatga atgaactata atttttaagt 2300
tatgcccatt tataacgttg tttatgaata cattgtgagt tagaaaacaa 2350
cttaaaaattt ggggtataga acccctcaac aggttagtaa tggctggaatt 2400
cttgatgagc aataatgata accagagagt gatttcattt acaactcatg 2450
tagtataaaa agagatacat ttccctctta ggccctggg agaagagcag 2500
cttagatttc cctactggca aggtttttta aaatgaggta aatgccttat 2550
atgatcaatt accttaattg gccaagaaaa tgcctcaggt gtctaggggt 2600
atctcttgc acacttgac aacaaaggtc aataagatcc ttgcctatga 2650

ataccctctcc cttttgcgct gthaaatttg caatgagaag caaattttaca 2700
 gtaccataac taataaagca gggtagagat ataaactact gcattcttttc 2750
 tataaaaactg tgattaagaa ttctacctct cctgtatggc tgttactgta 2800
 ctgtactctc tgaactccta cctaacaatg aatttgttac ataactctct 2850
 acatgtatga tttgtgcac tgatctttaa cctatgatto agtaactctt 2900
 taccatataa aaacgataat tgctttattt ggaaaagaat ttagggaatac 2950
 taaggacaat tattttttata gacaaagtaa aaagacagat atttaagagg 3000
 cataaccaaa aaagcaaaaac ttgtaaacag agtaaaaaac tttaatatct 3050
 ctaaagacat actggtttac tgcttcatat gctttcttca atttcactat 3100
 tccattctta aattaaagtt atgctaaatt gagtaagctg ttatcactt 3150
 aacagctcat tttgtctttt tcaatatata aattttaaaa atactacaat 3200
 atttaactaa ggcccaaccg atttcataa tgtagcagtt accgtgttca 3250
 cctcacacta aggcctagag tttgtcttga tatgcatttg gatgattaat 3300
 gctatgctgt tctttcatgt gaatgtcaag acatggaggg tgttcgtaat 3350
 tttatggtaa aattaatcct ccttacacat aatggtgtct taaaattgac 3400
 aaaaattgag cactacacat tgtatgtctc ctcaaagaa gattctttat 3450
 gtgaaatttt aaaagacatt gattccgcat gtaaggattt tccatctgaa 3500
 gtacaataat gcacaatcag tgttgcctaa actgctttat acttataaac 3550
 agccatctta aataagcaac gtattgtgag tactgatatg tatataataa 3600
 aaattatcaa aggaaaa 3617

<210> 447
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 447
 Met Gly Asp Lys Ile Trp Leu Pro Phe Pro Val Leu Leu Leu Ala
 1 5 10 15
 Ala Leu Pro Pro Val Leu Leu Pro Gly Ala Ala Gly Phe Thr Pro
 20 25 30
 Ser Leu Asp Ser Asp Phe Thr Phe Thr Leu Pro Ala Gly Gln Lys
 35 40 45
 Glu Cys Phe Tyr Gln Pro Met Pro Leu Lys Ala Ser Leu Glu Ile
 50 55 60

Glu Tyr Gln Val Leu Asp Gly Ala Gly Leu Asp Ile Asp Phe His	65	70	75
Leu Ala Ser Pro Glu Gly Lys Thr Leu Val Phe Glu Gln Arg Lys	80	85	90
Ser Asp Gly Val His Thr Val Glu Thr Glu Val Gly Asp Tyr Met	95	100	105
Phe Cys Phe Asp Asn Thr Phe Ser Thr Ile Ser Glu Lys Val Ile	110	115	120
Phe Phe Glu Leu Ile Leu Asp Asn Met Gly Glu Gln Ala Gln Glu	125	130	135
Gln Glu Asp Trp Lys Lys Tyr Ile Thr Gly Thr Asp Ile Leu Asp	140	145	150
Met Lys Leu Glu Asp Ile Leu Glu Ser Ile Asn Ser Ile Lys Ser	155	160	165
Arg Leu Ser Lys Ser Gly His Ile Gln Ile Leu Leu Arg Ala Phe	170	175	180
Glu Ala Arg Asp Arg Asn Ile Gln Glu Ser Asn Phe Asp Arg Val	185	190	195
Asn Phe Trp Ser Met Val Asn Leu Val Val Met Val Val Val Ser	200	205	210
Ala Ile Gln Val Tyr Met Leu Lys Ser Leu Phe Glu Asp Lys Arg	215	220	225

Lys Ser Arg Thr

<2110> 448

<2110> 23

<2110> TGA

<2110> Artificial Sequence

<2120>

<2120> Synthetic oligonucleotide probe

<4010> 448

ccccagcaggg ctgggcgaca aga 23

<2110> 449

<2110> 23

<2110> TGA

<2110> Artificial Sequence

<2120>

<2120> Synthetic oligonucleotide probe

<4010> 449

gttcttccagt ttcatatcca ata 23

<110> 450

<111> 43

<112> DNA

<113> Artificial Sequence

<120>

<121> Synthetic oligonucleotide probe

<400> 450

ccagaaggag ccagggggaag ggcagccaga tcttgctggc cat 43

<210> 451

<211> 859

<212> DNA

<213> Homo sapiens

<400> 451

ccatccctga gatcttttta taaaaaaccc agtctttgct gaccagacaa 50
agcatccag atctaccag agagtgcag acactatgct gcttcccatg 100
gcctgcccga gtgtgtcctg gatgctgctt tctgctcca tcttccctgtg 150
ccagggttcaa ggtgaagaaa ccagaaggga actgcctctt ccacggatca 200
ctcttcccaa aggtctcaag gctatggct cccctgcta tgccttgctt 250
ttgtcaccba aatcctggat ggatgcagat ctggcttgcc agaagoggcc 300
ctctggaaaa ctggtgtctg tctcagtggt ggctgaggga tcttctgtgt 350
cttccctgggt gaggagcatt agtaacagct actcattcat ctggattggg 400
ctccatgacc ccacacaggg ctctgagcct gatggagatg gatgggagtg 450
gagtagcact gatgtgatga attactttgc atgggagaaa aatccctcca 500
ccatcttcaa cctggccac tctgggagcc tgtcaagaag cacaggattt 550
ctgaagtggg aagattataa ctgtgatgca aagttacct atgtctgcaa 600
gttcaaggac tagggcaggt ggggaagtcag cagcctcagc tgggctgca 650
gctcatcatg gacatgagac cagtgtgaag actcaccctg gaagagaata 700
tttcccccba actgccttac ctgactacct tgtcatgata ctctttcttt 750
ttcttttttc ttcaccttca tttcaggctt tctctgtct tccatgtctt 800
gagctctcag agaataataa taaaaatgtt actttataaa aaaaaaaaaa 850
aaaaaaaaa 859

<210> 452

<211> 175

0012* PRT
 0013* Homo sapiens

0400* 452
 Met Leu Pro Pro Met Ala Leu Pro Ser Val Ser Trp Met Leu Leu
 1 5 10 15
 Ser Cys Leu Ile Leu Leu Cys Gln Val Gln Gly Glu Glu Thr Gln
 20 25 30
 Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys
 35 40 45
 Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser
 50 55 60
 Trp Met Asp Ala Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys
 65 70 75
 Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser
 80 85 90
 Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly
 95 100 105
 Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp
 110 115 120
 Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys
 125 130 135
 Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser
 140 145 150
 Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala
 155 160 165
 Lys Leu Pro Tyr Val Cys Lys Phe Lys Asp
 170 175

0010* 453
 0011* 550
 0012* DNA
 0013* Homo sapiens

0400* 453
 ccagtctgtc gccacctcac ttggtgtctg ctgtccccgc caggcaagcc 50
 tggggtgaga ggcagagga gtgggcggg accatgggg ggacggggct 100
 cggctctctg gagctgtgtc ttgctgctg cggagagctg ggcggggccc 150
 tgcctgtgta cgtctgtccg gagcccacag gactgtcgga ctgtgtcacc 200
 atggccacct gcaccaccaa cgaaacctg tgcaagacca cactctactc 250
 cggggagata gtgtacccc tcaggggga ctccacggtg accaagtctc 300

gtgacagcaa gtgtaagccc tgggatgtgg atggcatcgg ccagacccctg 350
 cccgtgtccct gctgcaatac tgagctgtgc aatgtagacg gggcgccccc 400
 tctgaacagc ctccactgag gggccctcac gctctccca ctcttgagcc 450
 tccgactgta gactccccc ccacccccat ggccttatgc ggccagccc 500
 cgaatgcctt gaagaagtgc cccctgcacc agggaaaaaa aaaaaaaaaa 550

<210> 454
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 454
 Met Arg Gly Thr Arg Leu Ala Leu Leu Ala Leu Val Leu Ala Ala
 1 5 10 15
 Cys Gly Glu Leu Ala Pro Ala Leu Arg Cys Tyr Val Cys Pro Glu
 20 25 30
 Pro Thr Gly Val Ser Asp Cys Val Thr Ile Ala Thr Cys Thr Thr
 35 40 45
 Asn Glu Thr Met Cys Lys Thr Thr Leu Tyr Ser Arg Glu Ile Val
 50 55 60
 Tyr Pro Phe Gln Gly Asp Ser Thr Val Thr Lys Ser Cys Ala Ser
 65 70 75
 Lys Cys Lys Pro Ser Asp Val Asp Gly Ile Gly Gln Thr Leu Pro
 80 85 90
 Val Ser Cys Cys Asn Thr Glu Leu Cys Asn Val Asp Gly Ala Pro
 95 100 105
 Ala Leu Asn Ser Leu His Cys Gly Ala Leu Thr Leu Leu Pro Leu
 110 115 120
 Leu Ser Leu Arg Leu
 125

<100> 455
 <110> 1513
 <120> DNA
 <130> Homo sapiens

<400> 455
 ctgcagtcag gactctggga ccgcaggggg ctccgggacc ctgactctgc 50
 agccgaaccc gcaaggcttc gtggggaccc aggccttcaa agtgaaggtc 100
 attttctctt tttttctccc tcttgagtcc ttctgagatg atggtctctg 150
 gccgcagcgg agctaccggg gtctttgtcg cgatggtagc ggcggtcttc 200

ggggggccacc ctctgtctggg agtgagcgcc accttgaact cggttctcaa 250
ttccaaagct atcaagaacc tgcggccacc gctggggggg gctggggggg 300
acccaggctc tgcagtcagc ggcggcgccg gaatctgtc cccggggggg 350
aataagtacc agaccattga caactaccag ccgtacccgt ggcgagagga 400
cgaggagtgc ggcactgatg agtaactggc tagtccacc cggggagggg 450
acgaggggtt gcaaatctgt ctgccttgc ggaagggcg aaaaagctgc 500
atgggtcagc ctatgtgctg cccggggaat taactgcaaaa atggaatatg 550
tgtgtctctc gatcaaaaac atttcggagg agaaattgag gaaaccatca 600
ctgaaagctt tggtaatgat catagccact tggatgggtt tccagaaga 650
accaccttgt cttcaaaaaa gtatcacacc aaaggacaag aaggttctgt 700
ttgtctccgg tcatcagact gtgcctcagg attgtgttgt gctagacact 750
ctgggtccaa gatctgtaaa cctgtcctga aagaaggcca agtgtgtacc 800
aagcatagga gaaaaggctc tcatggacta gaaatattcc aggttgttta 850
ctggggagaa ggtctgtctc ggcggataca gaaagatcac catcaagcca 900
gtaattcttc taggttcac acctgtcaga gacactaaac cagctatcca 950
aatgcagtga actcctttta tataatagat gctatgaaaa ccttttatga 1000
cttcacacca ctcaatctta aggatataca agttctgtg ttcagttta 1050
gcattccaat aacaccttcc aaaaacctgg agtgtaagag ctttgtctct 1100
ctatggaaat cccctgtgat tgcagttaat taactgtattg caaattctca 1150
gtggggcact taacctgaaa tgcattgaaa cttttaatta tttctctaaa 1200
gggtctgcac tgcctatctt tctctctgtt atgtaaattt ctgtacacat 1250
tgattgttat ctgcactgac aaatattcta tattgaactg aagtaaatca 1300
tttcagctta tagtctttaa aagcataacc ctttacccca ctttaattca 1350
gagtcctaga cgcaggatc ctttggaatg acaaatgata ggtacctaaa 1400
atgtaacatg aaaatactag cttattttct gaaatgtact atcttaatgc 1450
ctaaattata tttcccttta ggcctgtgata gtttttgaaa taaaatttaa 1500
catctaaaaa aaaaaaaaa 1518

<210> 456

<211> 266

02120 PRT

02130 Homo sapiens

04000 446

Met	Met	Ala	Leu	Gly	Ala	Ala	Gly	Ala	Thr	Arg	Val	Phe	Val	Ala
1			3						10					15
Met	Val	Ala	Ala	Ala	Leu	Gly	Gly	His	Pro	Leu	Leu	Gly	Val	Ser
			20						25					30
Ala	Thr	Leu	Asn	Ser	Val	Leu	Asn	Ser	Asn	Ala	Ile	Lys	Asn	Leu
			35						40					45
Pro	Pro	Pro	Leu	Gly	Gly	Ala	Ala	Gly	His	Pro	Gly	Ser	Ala	Val
			50						55					60
Ser	Ala	Ala	Pro	Gly	Ile	Leu	Tyr	Pro	Gly	Gly	Asn	Lys	Tyr	Gln
			65						70					75
Thr	Ile	Asp	Asn	Tyr	Gln	Pro	Tyr	Pro	Cys	Ala	Glu	Asp	Glu	Glu
			80						85					90
Cys	Gly	Thr	Asp	Gln	Tyr	Cys	Ala	Ser	Pro	Thr	Arg	Gly	Gly	Asp
			95						100					105
Ala	Gly	Val	Gln	Ile	Cys	Leu	Ala	Cys	Arg	Lys	Arg	Arg	Lys	Arg
			110						115					120
Cys	Met	Arg	His	Ala	Met	Cys	Cys	Pro	Gly	Asn	Tyr	Cys	Lys	Asn
			125						130					135
Gly	Ile	Cys	Val	Ser	Ser	Asp	Gln	Asn	His	Phe	Arg	Gly	Glu	Ile
			140						145					150
Glu	Glu	Thr	Ile	Thr	Gln	Ser	Phe	Gly	Asn	Asp	His	Ser	Thr	Leu
			155						160					165
Asp	Gly	Tyr	Ser	Arg	Arg	Thr	Thr	Leu	Ser	Ser	Lys	Met	Tyr	His
			170						175					180
Thr	Lys	Gly	Gln	Glu	Gly	Ser	Val	Cys	Leu	Arg	Ser	Ser	Asp	Cys
			185						190					195
Ala	Ser	Gly	Leu	Cys	Cys	Ala	Arg	His	Phe	Trp	Ser	Lys	Ile	Cys
			200						205					210
Lys	Pro	Val	Leu	Lys	Glu	Gly	Gln	Val	Cys	Thr	Lys	His	Arg	Arg
			215						220					225
Lys	Gly	Ser	His	Gly	Leu	Glu	Ile	Phe	Gln	Arg	Cys	Tyr	Cys	Gly
			230						235					240
Glu	Gly	Leu	Ser	Cys	Arg	Ile	Gln	Lys	Asp	His	His	Gln	Ala	Ser
			245						250					255
Asn	Ser	Ser	Arg	Leu	His	Thr	Cys	Gln	Arg	His				
			260						265					

<210> 457
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 33, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473,
509, 556
<223> unknown base

<400> 457
tctgttttccc tgcagtcaga atttgggaacn gcaggggttc ccggacctga 50
ttttgcagcg gaaagggaag gttttgtggg acccaggttg aaatgaacgt 100
catttttttt tctttctctt tctggagtc ctttgagang atggtttttg 150
gogcagcggg agctaaaccc gttttttgtt gcgatggtag ccggcggttt 200
cgcgcgccac ctntgtcgg gagtgagcgc cactctgaat cggctctcaa 250
ttccaaacgt atcaagaacc tgcacccacc gntggggcggc gctgcggggc 300
accaggttt tgcagtcaga gcgcgcggg gaactctgta ccggggcggg 350
ataaagtacc agaccattga caattaccag ccgtaccctt gcgcagagga 400
cgagagtg gcacctgat agtaactgcg tagtccacc ccgggagggg 450
agcgggggt gcacatntgt ntngcctgca ggaagcgcg aaaaacgtgc 500
atcggtcang ctatgtgctg ccccgggcat tactgcacaa atggaatatg 550
tctgtttctt gctcaaaatc atttcggagg agaaattgag gaaaccatca 600
ctgaaagctt tggtaatgat catagcactt cggatggg 633

<210> 458
<211> 4040
<212> DNA
<213> Homo sapiens

<400> 458
gagggaaccta ccggtacgg ccgcgcgcctg gtagtcggcg gtgtggctgc 50
acctcaccaa tccgtgcgc ccgggctggg ccgtcggaga gtgcgtgtgc 100
ttctctctcg cactgggtgc ttgggctcgg ccaggcgggg tccgcgcaca 150
gggtttgagg atgggggagt agctacagga agcgaccccg cgatgggaag 200
gtatatcttt gtggaatgaa aagggaagtat tagaaatgag ctgaagacca 250
ttcacagatt aatatctttg gggacagatt tgtgatgctt gattcacctt 300

tgaagtaatg tagacagaag ttctcaaatt tgcattattac atcaactgga 350
accagcagtg aatcttaatg ttcaacttaa tcagaacttg cataagaaag 400
agaatgggag tctggttaaa taaagatgac tatatcagag acttgaaaag 450
gacattcttc tgtttctga tagtgtatat ggccatttta gtgggcacag 500
atcaggattt ttacagttaa ctgggagtgt ccaaaaactgc aagcagtaga 550
gaaataagac aagctttcaa gaaattggca ttgaagttac atcttgataa 600
aaacccgaat aacccaaatg cacatggga ttttttaaaa ataaatagag 650
catatgaagt actcaagat gaagatctac ggaaaaagta tgacaaatat 700
ggagaaaaag gaacttgagga taatcaaggt ggccagtatg aaagctggaa 750
ctattatctg tatgattctg gtacttatga tgatgatctt gaaatcataa 800
cattggaaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850
tttgtaaat tttactcccc aggtgttca cactgcatg atttagctcc 900
cacatggaga gaacttgcta aagaagtggg tgggttaact cgaattggag 950
ctgttaactg tggtagtat agaactcttc gcgaatgaa aggagtcaac 1000
agctatcccc gtctctccat tcttgggtct ggaatggccc cagtgaata 1050
ccatggagac agatcaaagg agagttagt gagtcttgca atgcagcatg 1100
ctagaagtac agtgacagaa ccttggacag gaaattctgt caactccata 1150
caaaactgctt ttgctgctgg cattggctgg ctgatcactt ttgttcaaa 1200
aggaggagat tgtttgaact cacagacag actcaggctt agtggcatgt 1250
tgtttctcaa ctcatggat gctaaagaaa tatatttggg agtaatacat 1300
aatcttccag attttgaact actttggga aacacactag aggatcgttt 1350
ggctcatcat cgggtggctg tttttttca ttttggaaaa aatgaaaatt 1400
caaatgctcc tgagctgaaa aaactaaaaa ctctacttaa aaatgatcat 1450
attcaagctg gcaggtttga ctgttctctt gcaccagaca tctgtagtaa 1500
ctgtatgtt tttcagcgt ctctagcagt atttaaagga caagggaacca 1550
aagaatatga aattcatcat ggaaagaaga ttctatatga tataacttgc 1600
tttgccaaaag aaagtgtgaa ttctcatgtt accacgcttg gaactcaaaa 1650
tttctctgcc aatgacaaaag aacatggct tgttgatttc ttgccccct 1700
ggtgtccacc atgtcagagt ttactaccag agttacgaag agcatcaaat 1750

ettotttatg gtcagottaa gtttggtaaa ctagattgta cagttcatga 1800
gggactctgt aacatgtata acattcagga ttatccaaca acagtgggtat 1850
tcaaccagtc caacattcat gagtatgaag gacatcactc tgcagaacaa 1900
atottggagt toatagagga tottatgaat cottcagtggt totcctttac 1950
accacaccac ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000
ggatgggtga tttctattct cagtgggtgc atccttgcca agtcttaaty 2050
ccagaatgga aaagaatgga caggacatta actggactga tcaacgtggg 2100
cagtatagat tgcacacagt atcattcttc ttgtgcccag gaaaacgttc 2150
aaagataccc cgagataaga ttttttcccc caaaatccaa taaagcttat 2200
cagtatcaca gttacaatgg ttggaatagg gatgcttact cctgagaat 2250
ctgggggtcta ggattttttac ctcaagtacc cacagatcta acacctcaga 2300
ctttcagtga aaaagtctta caagggaaaa atcattgggt gattgatttc 2350
tatgctcctt ggtgtggacc ttgcacagaat ttgtctccag aattcgagct 2400
ctgggttagg atgattaaag gaaaagtga aagtggaaaa gtgactgtc 2450
aggcttatgc tcagacatgc cagaaagctg ggatcagggc ctatccaaat 2500
gttaagtctt attttacga aagagcaaa agaaattttc aagaagagca 2550
gataaatacc agagatgcaa aagcaatgc tgccttaata agtgaaaaat 2600
tgjaaaactct ccgaaatcaa ggcaagagga ataaggatga actttgataa 2650
tgttgaagat gaagaaaaag tttaaaagaa attctgacag atgacatcag 2700
aagacaccta tttagaatgt tacatttatg atgggaatga atgaacatta 2750
tottagactt gcagttgtac tgcacagaatt atctacagca ctggtgtaaa 2800
agaagggctt gcaaaccttc ttgttaaagg gcgggtttat aaatatttta 2850
gactttgcag gctataatat atggttcaca catgagaaca agaataagagt 2900
catcatgtat ctttgttat ttgcttttaa caacctttaa aaaatattaa 2950
aacgattctt agctcagagc cacaacaaa taggctggat tcagtcacag 3000
gaccatagat tgcgtgcccc ctgacggac ttataatgtt tcaggtggct 3050
ggcttgaaca tgagtctgt gtgctatcta cataaatgtc taagtgtat 3100
aaagtccact ttcccttcac gttttttggc tgacctgaaa agaggtaact 3150

tagtttttgg tcaattgttc tctaaaaaat gctatccta accatatatt 3200
tatatttctg tttaaaaaca cccatgatgt ggcacagtaa acaaaacctg 3250
ttatgtgtta ttattatgag gagattcttc attgtttctt ttctctctca 3300
aaggttgaaa aaatgotttt aattttttcac agcagagaaa cagtgcagca 3350
gtatattgtc acacagtaag tacacaaatt tgagcaacag taagtgcaca 3400
aattctgtag tttgtgttat catccaggaa aacctgaggg aaaaaaatta 3450
tagcaattaa ctgggcattg tagagtatcc taaatatgtt atcaagtatt 3500
tagagttcta tatttttaaag atatatgtgt tcatgtattt ctgaaaattg 3550
cttccataga aattttccca ctgatagttg atttttgagg catctaatat 3600
ttacataatt gcctttctgaa cttgtttttg aactgtatcc tttatttaca 3650
ctgggttttt cttccatagt tttggttttt cactctgttc cagtctattt 3700
attattcaaa taggaaaaat tactttacag gttgttttac tgtagcttat 3750
aatgatactg tagttattcc agttaactgt ttaactgtac agggctgctt 3800
tttccagata aatattgaca taataactga agttattttt ataagaaaaat 3850
caagtatata aacttaggaa agggatcttc tagtttctgt gttgtttaga 3900
ctcaagaat cacaaatttg tcaagtaacat gtagttgttt agttataatt 3950
cagagtgtac agaattgtta aaattccaat cagtcaaaaag aggtcaatga 4000
attaaaagga tgcacattt ttcaaaaaaa aaaaaaaa 4040

<211> 459
<211> 747
<212> PRT
<213> Homo sapiens

<214> 459
Met Gly Val Trp Leu Asn Lys Asp Asp Tyr Ile Arg Asp Leu Lys
1 5 10 15
Arg Ile Ile Leu Cys Phe Leu Ile Val Tyr Met Ala Ile Leu Val
20 25 30
Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr
35 40 45
Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu
50 55 60
Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly
65 70 75

Asp	Phe	Leu	Lys	Ile	Asn	Arg	Ala	Tyr	Glu	Val	Leu	Lys	Asp	Glu	
				80					85					90	
Asp	Leu	Arg	Lys	Lys	Tyr	Asp	Lys	Tyr	Gly	Glu	Lys	Gly	Leu	Glu	
				95					100					105	
Asp	Asn	Gln	Gly	Gly	Gln	Tyr	Glu	Ser	Trp	Asn	Tyr	Tyr	Arg	Tyr	
				110					115					120	
Asp	Phe	Gly	Ile	Tyr	Asp	Asp	Asp	Pro	Glu	Ile	Ile	Thr	Leu	Glu	
				125					130					135	
Arg	Arg	Glu	Phe	Asp	Ala	Ala	Val	Asn	Ser	Gly	Glu	Leu	Trp	Phe	
				140					145					150	
Val	Asn	Phe	Tyr	Ser	Pro	Gly	Cys	Ser	His	Cys	His	Asp	Leu	Ala	
				155					160					165	
Pro	Thr	Trp	Arg	Asp	Phe	Ala	Lys	Glu	Val	Asp	Gly	Leu	Leu	Arg	
				170					175					180	
Ile	Gly	Ala	Val	Asn	Cys	Gly	Asp	Asp	Arg	Met	Leu	Cys	Arg	Met	
				185					190					195	
Lys	Gly	Val	Asn	Ser	Tyr	Pro	Ser	Leu	Phe	Ile	Phe	Arg	Ser	Gly	
				200					205					210	
Met	Ala	Pro	Val	Lys	Tyr	His	Gly	Asp	Arg	Ser	Lys	Glu	Ser	Leu	
				215					220					225	
Val	Ser	Phe	Ala	Met	Gln	His	Val	Arg	Ser	Thr	Val	Thr	Glu	Leu	
				230					235					240	
Trp	Thr	Gly	Asn	Phe	Val	Asn	Ser	Ile	Gln	Thr	Ala	Phe	Ala	Ala	
				245					250					255	
Gly	Ile	Gly	Trp	Leu	Ile	Thr	Phe	Cys	Ser	Lys	Gly	Gly	Asp	Cys	
				260					265					270	
Leu	Thr	Ser	Gln	Thr	Arg	Leu	Arg	Leu	Ser	Gly	Met	Leu	Phe	Leu	
				275					280					285	
Asn	Ser	Leu	Asp	Ala	Lys	Glu	Ile	Tyr	Leu	Glu	Val	Ile	His	Asn	
				290					295					300	
Leu	Pro	Asp	Phe	Glu	Leu	Leu	Ser	Ala	Asn	Thr	Leu	Glu	Asp	Arg	
				305					310					315	
Leu	Ala	His	His	Arg	Trp	Leu	Leu	Phe	Phe	His	Phe	Gly	Lys	Asn	
				320					325					330	
Glu	Asn	Ser	Asn	Asp	Pro	Glu	Leu	Lys	Lys	Leu	Lys	Thr	Leu	Leu	
				335					340					345	
Lys	Asn	Asp	His	Ile	Gln	Val	Gly	Arg	Phe	Asp	Cys	Ser	Ser	Ala	
				350					355					360	

Pro Asp Ile Cys Ser Asn Leu Tyr Val Phe Gln Pro Ser Leu Ala	365	370	375
Val Phe Lys Gly Gln Gly Thr Lys Glu Tyr Glu Ile His His Gly	380	385	390
Lys Lys Ile Leu Tyr Asp Ile Leu Ala Phe Ala Lys Glu Ser Val	395	400	405
Asn Ser His Val Thr Thr Leu Gly Pro Gln Asn Phe Pro Ala Asn	410	415	420
Asp Lys Glu Pro Trp Leu Val Asp Phe Phe Ala Pro Trp Cys Pro	425	430	435
Pro Cys Arg Ala Leu Leu Pro Gln Leu Arg Arg Ala Ser Asn Leu	440	445	450
Leu Tyr Gly Gln Leu Lys Phe Gly Thr Leu Asp Cys Thr Val His	455	460	465
Glu Gly Leu Cys Asn Met Tyr Asn Ile Gln Ala Tyr Pro Thr Thr	470	475	480
Val Val Phe Asn Gln Ser Asn Ile His Glu Tyr Glu Gly His His	485	490	495
Ser Ala Glu Gln Ile Leu Glu Phe Ile Glu Asp Leu Met Asn Pro	500	505	510
Ser Val Val Ser Leu Thr Pro Thr Thr Phe Asn Glu Leu Val Thr	515	520	525
Gln Arg Lys His Asn Glu Val Trp Met Val Asp Phe Tyr Ser Pro	530	535	540
Trp Cys His Pro Cys Gln Val Leu Met Pro Glu Trp Lys Arg Met	545	550	555
Ala Arg Thr Leu Thr Gly Leu Ile Asn Val Gly Ser Ile Asp Cys	560	565	570
Gln Gln Tyr His Ser Phe Cys Ala Gln Glu Asn Val Gln Arg Tyr	575	580	585
Pro Glu Ile Arg Phe Phe Pro Pro Lys Ser Asn Lys Ala Tyr Gln	590	595	600
Tyr His Ser Tyr Asn Gly Trp Asn Arg Asp Ala Tyr Ser Leu Arg	605	610	615
Ile Trp Gly Leu Gly Phe Leu Pro Gln Val Ser Thr Asp Leu Thr	620	625	630
Pro Gln Thr Phe Ser Glu Lys Val Leu Gln Gly Lys Asn His Trp	635	640	645

Val Ile Asp Phe Tyr Ala Pro Trp Cys Gly Pro Cys Gln Asn Phe
650 655 660

Ala Pro Glu Phe Glu Leu Leu Ala Arg Met Ile Lys Gly Lys Val
665 670 675

Lys Ala Gly Lys Val Asp Cys Gln Ala Tyr Ala Gln Thr Cys Gln
680 685 690

Lys Ala Gly Ile Arg Ala Tyr Pro Thr Val Lys Phe Tyr Phe Tyr
695 700 705

Glu Arg Ala Lys Arg Asn Phe Gln Glu Glu Gln Ile Asn Thr Arg
710 715 720

Asp Ala Lys Ala Ile Ala Ala Leu Ile Ser Glu Lys Leu Glu Thr
725 730 735

Leu Arg Asn Gln Gly Lys Arg Asn Lys Asp Glu Leu
740 745

<217> 460

<217> 24

<217> DNA

<217> Artificial Sequence

<218>

<218> Synthetic oligonucleotide probe

<400> 460

actcccccagg ctgttcacac tggc 24

<219> 461

<219> 24

<219> DNA

<219> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 461

gptcagccag ccaataccag cagg 24

<219> 462

<219> 50

<219> DNA

<219> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 463

gtgctgatga tagaatgctt tgcgaatga aaggagtcaa cagctatccc 50

<219> 463

<219> 1818

<219> DNA

<213> Homo sapiens

<400> 463

agacagtacc tcttccctag gactacacaa ggaactgaacc agaaggaaga 50
ggacagagca aagccatgaa catcatctta gaaatcttct tctttctgat 100
caccatcctc taactctact tggagtcgtt ggtgaagttt ttcattctct 150
agaggagaaa atctgtggct ggggagattg ttctcattac tggagctggg 200
catggaatag gcaggcagac tacttatgaa ttggcaaaaac gacagagcat 250
attgggttctg tgggatatta ataagcgggg tgtggaggaa actgcagctg 300
agtgcgaaa actaggcgct actgcgcatg cgtatgttgt agactgcagc 350
aacagagaag agatctatcg ctctctaaat caggtgaaga aagaagtggg 400
tgatgtaaca atcgtgttga ataatgctgg gacagtatat ccagccgctc 450
tcttcagcac caaggatgaa gagattacca agacatttga ggtcaacatc 500
ctaggacatt ttgggacac aaaagcactt ctcccatcga tgatggagag 550
aaatcatggc cacatcgtca cagtggtctc agtgcggggc caggaaggga 600
tctcttacct catcccatat tgttcacgca aatttgccgc tgttggcttt 650
cacagaggtc tgacatcaga acttcaggcc ttgggaaaaa ctggtatcaa 700
aacctcatgt ctctgcccag tttttgtgaa taactgggttc accaaaaatc 750
caagcacaaag attatgggct gtattggaga cagatgaaat cgtaaagaat 800
ctgatagatg gaatacttac caataagaaa atgattctctg ttcacatcgt 850
tatcaatata tttctgagac tacagaagtt tcttcttgaa cgcgcctcag 900
cgattttaaa cgttatgcag aatattcaat ttgaagcagt ggttggccac 950
aaaatcaaaa tgaaatgaat aaataagctc cagccagaga tgtatgcatg 1000
ataatgatat gaatagtttc gaatcaatgc tgcaaaagctt tatttcacat 1050
tttttcagtc ctgataatat taaaaacatt ggtttggcac tagcagcagt 1100
caaacgaaca agattaatta cctgtcttctc tgtttctcaa gaatatttac 1150
gtagtttttc ataggtctgt ttttcttctc atgctcttta aaaactctctg 1200
tgcttacata aacatactta aaaggcttctc tctaagatat tctatttttc 1250
catttaaagg tggacaaaag ctacctcctt aaaagtaaat acaaaagagaa 1300
cttattttaca caggggaaggt ttaagactgt tcaagtagca ttccaatctg 1350

tagccatgcc acagaatata aacaagaaca cagaatgagt gcacagctaa 1400
 gagatcaagt ttcagcaggg agctttatct caacctggac atattttaag 1450
 attcagcatt tgaagattt cctagacctt ttctttttt attagcccaa 1500
 aacgggtcaa ctctattctg gactttatta ctgattctg tcttctgtat 1550
 aactctgaag tccacaaaaa gtggacctc tatatttctt ccttttttat 1600
 agtcttataa gatacattat gaaagggtgac cgactctatt ttaaattctc 1650
 gaattttaag ttctagcccc atgataacct tttcttttgt aatttatgct 1700
 ttcatatata ctgggtacca gagatgttta gacaatttta ggctcaaaaa 1750
 ttaaagctaa cacaggaaaa ggaactgtac tggctattac ataagaaaca 1800
 atggacccaa gagaagaa 1818

<210> 464
 <211> 300
 <212> PRT
 <213> Homo sapiens

<400> 464
 Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Ile Thr Ile Ile
 1 5 10 15
 Tyr Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg
 20 25 30
 Arg Lys Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
 35 40 45
 His Gly Ile Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln
 50 55 60
 Ser Ile Leu Val Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu
 65 70 75
 Thr Ala Ala Glu Cys Arg Lys Leu Gly Val Thr Ala His Ala Tyr
 80 85 90
 Val Val Asp Cys Ser Asn Arg Glu Glu Ile Tyr Arg Ser Leu Asn
 95 100 105
 Gln Val Lys Lys Glu Val Gly Asp Val Thr Ile Val Val Asn Asn
 110 115 120
 Ala Gly Thr Val Tyr Pro Ala Asp Leu Leu Ser Thr Lys Asp Gln
 125 130 135
 Glu Ile Thr Lys Thr Phe Glu Val Asn Ile Leu Gly His Phe Trp
 140 145 150
 Ile Thr Lys Ala Leu Leu Pro Ser Met Met Glu Arg Asn His Gly

155	160	165
His Ile Val Thr Val Ala Ser Val Cys Gly His Glu Gly Ile Pro 170	175	180
Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe 185	190	195
His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys Thr Gly 200	205	210
Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly Phe 215	220	225
Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp 230	235	240
Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys 245	250	255
Met Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln 260	265	270
Lys Phe Leu Pro Glu Arg Ala Ser Ala Ile Leu Asn Arg Met Gln 275	280	285
Asn Ile Gln Phe Glu Ala Val Val Gly His Lys Ile Lys Met Lys 290	295	300

<210> 465
 <211> 1547
 <212> DNA
 <213> Homo sapiens

<400> 465
 cggcgaggcg tggggggg aggtgagggg gggaggtga gggggggag 50
 attccagca ggaaggggg ggtctgagg aagctgaagt gagaggggg 100
 gagaggggg agggggggg gggcaggatg accaagggg ggtgttggg 150
 gatggggg gtgctgggt ggtgttcat gatctgtg atcctgtgt 200
 actgggacg ggaaggggg gggacttct actgacac gtccttctt 250
 aggtggaca gggggggg ggtgggagc gggggggg acagggacg 300
 gagctcag gggactgg atgtgagga gttctggg aagtttctca 350
 ggtgtgggt gaagcagag gacttggca gaaggagag ggagcaggg 400
 cctgggggg ggagcagga ggagaggtg agaggtcag actggtggg 450
 ggagcagc gggggggg gagaccagg cgggagcag ggggagggg 500
 ggaggtgtt ggggggtt tgggcaact ccagctggg ctcccccac 550

aaggagagcg cattaagacga catccccaac tgggagctga gccacatgat 600
cgttgaagac aggaacgggg ccatactactg ctacgtggcc aaggtgggct 650
gcaaccaactg gaagagcgctg atgatactgc tgagcggaag cctgctggac 700
cggggtgggc cctaacggga ccgctgggc atcccgcgcg agcaagtgca 750
caacggcagc gggcaactga cctcaacaa gttctgggc cgtacggga 800
agctctcccg ccacctcatg aaggtcaagc tcaagaagta caccaagttc 850
ctcttctgga ggaacccctt cgtgagcctg atctccgctt tcggcagcaa 900
gttcgagctg gagaacgagg agttctacgg caagttcgcc gtgccatgc 950
tgggctctga cgcacaacac accagcctgc ccgctcggc gggcgaggcc 1000
ttccgagctg gctcaagggt gtccttcgac aacttcctcc agtacctgct 1050
ggacccgcac acggagaagc tggcgccctt caacgagcac tggggcgagg 1100
tgtacccgct ctgcaacccg tgcagatcg actacgaatt cgtggggaag 1150
ctggagaactc tggacgagga cgcgcgcag ctgctgcagc tactccaggt 1200
ggacgggcag ctccgcttcc ccgcgagcta ccggaacagg accgcagca 1250
gttgggagga ggaatggttc gccaagatcc ccctggcctg gaggcagcag 1300
ctgtataaac ctacgagga cgaacttggt ctcttcggct accccaagcc 1350
cgaaaaacct ctccgagact gaaagctttc ggttgcttt ttctcgctg 1400
cctggaaact gaagcagcg cactccagtc ttttatgac ctacgatttt 1450
gcaatcggg cttcttggtc actccactgc ctctatccat tgagtactgt 1500
atcgatattg tttttaaga ttaatatatt tcaggtattt aatacga 1547

#210 - 466
#211 - 414
#212 - PRT
#213 - Homo sapiens

#400 - 466
Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser
1 5 10 15
Val Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly
20 25 30
Ala Ala His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr
35 40 45
Gly Pro Pro Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu
50 55 60

Thr	Ala	Asp	Ser	Asp	Val	Asp	Glu	Phe	Leu	Asp	Lys	Phe	Leu	Ser	75
Ala	Gly	Val	Lys	Gln	Ser	Asp	Leu	Pro	Arg	Lys	Glu	Thr	Glu	Gln	80
Pro	Pro	Ala	Pro	Gly	Ser	Met	Glu	Glu	Ser	Val	Arg	Gly	Tyr	Asp	95
Trp	Ser	Pro	Arg	Asp	Ala	Arg	Arg	Ser	Pro	Asp	Gln	Gly	Arg	Gln	110
Gln	Ala	Glu	Arg	Arg	Ser	Val	Leu	Arg	Gly	Phe	Cys	Ala	Asn	Ser	125
Ser	Leu	Ala	Phe	Pro	Thr	Lys	Glu	Arg	Ala	Phe	Asp	Asp	Ile	Pro	140
Asn	Ser	Glu	Leu	Ser	His	Leu	Ile	Val	Asp	Asp	Arg	His	Gly	Ala	155
Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr	Asn	Trp	Lys	Arg	170
Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg	Gly	Ala	Pro	185
Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His	Asn	Ala	200
Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly	Lys	215
Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys	230
Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	245
Arg	Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	260
Ala	Val	Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	275
Ala	Ser	Ala	Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	290
Ala	Asn	Phe	Ile	Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	305
Ala	Pro	Phe	Asn	Glu	His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	320
Pro	Cys	Gln	Ile	Asp	Tyr	Asp	Phe	Val	Gly	Lys	Leu	Glu	Thr	Leu	335

Asp Glu Asp Ala Ala Gln Leu Leu Gln Leu Leu Gln Val Asp Arg
350 355 360

Gln Leu Arg Phe Pro Pro Ser Tyr Arg Asn Arg Thr Ala Ser Ser
365 370 375

Trp Glu Glu Asp Trp Phe Ala Lys Ile Pro Leu Ala Trp Arg Gln
380 385 390

Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe Val Leu Phe Gly Tyr
395 400 405

Pro Lys Pro Glu Asn Leu Leu Arg Asp
410

<110> 467
<111> 1071
<112> DNA
<113> Homo sapiens

<100> 467
tcggggccaga attcgggcacg agggggccacg agggggccacg cctccacgggg 50
atttcggaggt gaaagaggcc cagagttagag agagagagag accgacgtac 100
acgggatggc taagggaacg cgttatgcgc ggaaggtggt ggtcgtgacc 150
aggggggggg ggggcacggc agctgggata gtggggggct cgtggaacag 200
cggggcccca gtgggttatct cgcacaagga tgagtctggg ggccggggccc 250
tcggacagga gtcacctgga gctgtcttta cctctgtga tctgactcag 300
gaagatgatg tgaagacctt ggtttctgag accatccgcc gattcgggcg 350
cctggattgt gtgtcaca caagctggcca ccaccacccc ccacagagggc 400
ctgaggagac ctctgcaccg ggattccgcc agctgctgga gctgaaacct 450
ctggggaagt acaccttgac caagctcgcc ctccacctacc tcgggaagag 500
tcaagggaat gtcatcaaca tctccagctt ggtggggggc atcgggcagg 550
ccagggcagt tccctatgtg gcacccaagg gggcagtaac agccatgacc 600
aaagctttgg cctgggatga aagtcacat ggtgtccgag tcaactgtat 650
ctccccagga aacatctgga ccccgctgtg ggaggagctg gcagccttaa 700
tgcacagacc tagggccaca atccgagagg gcctgctggc ccagccactg 750
agccgcctgg gccagccccc tgaggctggg gctgcggccg tgttcctggc 800
ctccgaagcc aactcttgca cgggcattga actgctcgtg acgggggggtg 850
cagagctggg gtacgggtgc aaggccagtc ggagcaccac cgtggacgcc 900

ccagatatac cttcctgatt tctctcattt ctacttgggg ccccttct 950
 aggaattctc caccaccaac tccaacctgt atcagatgca gcccaccaagc 1000
 ccttagactc taagccaggt tagcaaggtg ccgggtcacc ctgcaggttc 1050
 ccataaaaaa gatttgcagc c 1071

<210> 468
 <211> 270
 <212> PRT
 <213> Homo sapiens

<400> 468
 Met Ala Thr Gly Thr Arg Tyr Ala Gly Lys Val Val Val Val Thr
 1 5 10 15
 Gly Gly Gly Arg Gly Ile Gly Ala Gly Ile Val Arg Ala Phe Val
 20 25 30
 Asn Ser Gly Ala Arg Val Val Ile Cys Asp Lys Asp Glu Ser Gly
 35 40 45
 Gly Arg Ala Leu Glu Gln Glu Leu Pro Gly Ala Val Phe Ile Leu
 50 55 60
 Cys Asp Val Thr Gln Glu Asp Asp Val Lys Thr Leu Val Ser Glu
 65 70 75
 Thr Ile Arg Arg Phe Gly Arg Leu Asp Cys Val Val Asn Asn Ala
 80 85 90
 Gly His His Pro Pro Pro Gln Arg Pro Glu Glu Thr Ser Ala Gln
 95 100 105
 Gly Phe Arg Gln Leu Leu Glu Leu Asn Leu Leu Gly Thr Tyr Thr
 110 115 120
 Leu Thr Lys Leu Ala Leu Pro Tyr Leu Arg Lys Ser Gln Gly Asn
 125 130 135
 Val Ile Asn Ile Ser Ser Leu Val Gly Ala Ile Gly Gln Ala Gln
 140 145 150
 Ala Val Pro Tyr Val Ala Thr Lys Gly Ala Val Thr Ala Met Thr
 155 160 165
 Lys Ala Leu Ala Leu Asp Glu Ser Pro Tyr Gly Val Arg Val Asn
 170 175 180
 Cys Ile Ser Pro Gly Asn Ile Trp Thr Pro Leu Trp Glu Glu Leu
 185 190 195
 Ala Ala Leu Met Pro Asp Pro Arg Ala Thr Ile Arg Glu Gly Met
 200 205 210

Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val	Gly
				215					220					225
Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly
				230					235					240
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys
				245					250					255
Lys	Ala	Ser	Arg	Ser	Thr	Pro	Val	Asp	Ala	Pro	Asp	Ile	Pro	Ser
				260					265					270

<210> 469
 <211> 637
 <212> DNA
 <213> Homo sapiens

<400> 469
 aggggggag cagctgcagg ctgacctgga agcttggggg aatggactgg 50
 cctcacaacc tctgtttct ccttaccatt tctctcttcc tggggctggg 100
 ccagcccagg agcccacaaa gcaagaggaa ggggcaaggg cggcctgggc 150
 cctggcccc tggcctcac caggtgcac tggacctggt gtcacggatg 200
 aaacoytatg ccgcatgga ggagtatgag aggaacatcg aggagatggt 250
 ggcacagctg aggaacagct cagagctggc ccagagaaaag tctgaggtca 300
 acttgagct gtggatgtcc aacaagagga gctgtctcc cgggggtac 350
 agcatcaacc acgacccag cgtatcccc gtggacctga cggaggcacg 400
 gtgcctgtgt ctgggtgtg tgaacccct caccatgcag gaggacgca 450
 gcatggtgag cgtgcgggtg ttacgcagg ttctgtggg ccgcctctc 500
 tgcacgcac cgcacgcac agggccttga cgcacgcgc cagtcatgga 550
 naccatcgct gtgggtgca cctgcattt ctgaatcacc tggccagaa 600
 ggcaggccag cagcccgaga cctctctct tgcaccttg tgcacgaaa 650
 ggcctatgaa aagtaaacac tgaattttga aagcaag 637

<210> 470
 <211> 130
 <212> PRT
 <213> Homo sapiens

Met	Asp	Trp	Pro	His	Asn	Leu	Leu	Phe	Leu	Leu	Thr	Ile	Ser	Ile
1				5				10						15
Phe	Leu	Gly	Leu	Gly	Gln	Pro	Arg	Ser	Pro	Lys	Ser	Lys	Arg	Lys
				20				25						30

Gly	Gln	Gly	Arg	Pro	Gly	Pro	Leu	Ala	Pro	Gly	Pro	His	Gln	Val
				35					40					45
Pro	Leu	Asp	Leu	Val	Ser	Arg	Met	Lys	Pro	Tyr	Ala	Arg	Met	Glu
				50					55					60
Glu	Tyr	Glu	Arg	Asn	Ile	Glu	Glu	Met	Val	Ala	Gln	Leu	Arg	Asn
				65					70					75
Ser	Ser	Glu	Leu	Ala	Gln	Arg	Lys	Cys	Glu	Val	Asn	Leu	Gln	Leu
				80					85					90
Trp	Met	Ser	Asn	Lys	Arg	Ser	Leu	Ser	Pro	Trp	Gly	Tyr	Ser	Ile
				95					100					105
Asn	His	Asp	Pro	Ser	Arg	Ile	Pro	Val	Asp	Leu	Pro	Glu	Ala	Arg
				110					115					120
Cys	Leu	Cys	Leu	Gly	Cys	Val	Asn	Pro	Phe	Thr	Met	Gln	Glu	Asp
				125					130					135
Arg	Ser	Met	Val	Ser	Val	Pro	Val	Phe	Ser	Gln	Val	Pro	Val	Arg
				140					145					150
Arg	Arg	Leu	Cys	Pro	Pro	Pro	Pro	Arg	Thr	Gly	Pro	Cys	Arg	Gln
				155					160					165
Arg	Ala	Val	Met	Glu	Thr	Ile	Ala	Val	Gly	Cys	Thr	Cys	Ile	Phe
				170					175					180

<210> 471
 <211> 1363
 <212> DNA
 <213> Homo sapiens

<400> 471
 aggcggcag ggtaggcgg ggtggccctt ggtctccg cttccctgaa 50
 aaacccggcg ggagagcag gctgggggac ggcgctgac cttcccccaca 100
 ctcccccgcg agaagctcg ctgggcgcac aacatggcg gtggcgctg 150
 cggccgcag ctacggcg cctgggcgc ctggatcgg gctggggcg 200
 cgaaggcagg ccccgaggag gcgcgctgc cgcgggagca gagccgggtc 250
 cagcccacga ccgcctccaa ctggacgtg gtgatggag gcgagtggat 300
 gctgaaattt taaggcccat ggtgtccat ctggcagag actgattcag 350
 aatgggaggg ttttgcaag aatggtgaaa tacttcagat cagtgtgggg 400
 aaggtagatg ctattcaaga accaggttg agtggcgcct tctttgtcac 450
 cactctccca gcatttttt atgcaaaagga tgggatatt cgcggttata 500

gtggccbagg aatcttcgaa gacctgcaga attatatctt agagaagaaa 550
 tggcaatcag tcgagcctct gactggctgg aaatcccag cttctctaac 600
 gatgtctgga atggctggto tttttagcat ctctggcaag acatggcatc 650
 ttcacaaacta tttcacagtg actcttggaa ttctgtcttg gtgttctcat 700
 gtgtttttctg tcctagccac cttgggtttt ggcttttta tgggtcttgt 750
 cttggtggta ataccagaat gttctctatgt gccacttcca aggcatttat 800
 ctgagcgttc tcagcagaat cggagatcag aggaggctca tagagctgaa 850
 cagttgcagg atggcgaggga ggaaaaagat gattcaaatg aagaagaaaa 900
 caaagacagc cttgtagatg atgaagaaga gaaagaagat cttggcgatg 950
 aggatgaagc agaggaagaa gaggaggagg acaacttggc tgcctggtgtg 1000
 gatgaggaga gaagttaggc caatgatcag gggcccccag gagaggacgg 1050
 tctgaacccg gaggaagttag agctgagga ggtgaagaa ggcattctctg 1100
 agcaacccctg cccagctgac acagaggctg tggaaagactc cttgaggcag 1150
 cgtaaaaagtc agcatgctga caagggaactg tagatttaac gatgcgtctc 1200
 caagaataca caccaaaaaa atatgtcagc ttcccttttg cctgcagctt 1250
 gtaacaaatc ctttaattttt cctgaatgag caagcttctc ttaaaagatg 1300
 ctctctagtc atttggctct atggcagtaa gctcctgta tactaaggag 1350
 agtcttccag gtgtgacaat caggatatag aaaaacaaac gtagtgttg 1400
 gatctgtttg gagactggga tgggaacaag tcatttaact taggggtcag 1450
 agagtctcga ccagaggagg ccattcccag tcccaatcag cacttcccag 1500
 agacaaggct gcaggccctg tcgaatgaaa gccaaagcagg agccttggct 1550
 cctgagcctc cccaaagtgt aactgagaag ccttgcctcc ttttcttgtg 1600
 taaagtattt atttttgtca aattgcagga aacatcagga accacagtgc 1650
 atgaaaaatc tttcacagct agaaattgaa agggccttgg gtatagagag 1700
 cagctcagaa gtcattcccag cctctgcaat ctctgtgct atgtcttatt 1750
 tcttaccttt aatttttcca gcatttccc catgggcatt caggctctcc 1800
 acactcttca ctattatctc ctggtcagag gactccaata acagccaggt 1850
 ttacatgaac tgtgtttgtt cattctgacc taaggggttt agataatcag 1900
 taaccataac cctgaagct gtgactgcca aacatctcaa atgaaatgtt 1950

gtggccatca gagactcaaa aggaagtaag gattttacaa gacagattaa 2000
 aaaaaaatcg tttgtccaa aatatagttg ttgttgattt ttttttaagt 2050
 tttctaagca atatttttca agccagaagt cctctaagtc ttgccagtac 2100
 aaggtagtct tgtgaagaaa agttgaatac tgttttgttt tcatctcaag 2150
 gggttcctcg ggtcttgaac tactttaata ataactaaaa aaccacttct 2200
 gattttcctt cagtgaatgy cttttggtga aagaattaat gaactccagt 2250
 aactgaaagt gaaagatttg attttgtttc catcttctgt aatctttcaa 2300
 agaattatat ctttgtaaat ctctcaatac tcaattctact gtaagtaccc 2350
 agggaggcta atttcttt 2368

(210): 472
 (211): 349
 (212): PRT
 (213): Homo sapiens

(300): 472
 Met Ala Gly Gly Arg Cys Gly Pro Gln Leu Thr Ala Leu Leu Ala
 1 5 10 15
 Ala Trp Ile Ala Ala Val Ala Ala Thr Ala Gly Pro Gln Glu Ala
 20 25 30
 Ala Leu Pro Pro Gln Gln Ser Arg Val Gln Pro Met Thr Ala Ser
 35 40 45
 Asn Trp Thr Leu Val Met Glu Gly Glu Trp Met Leu Lys Phe Tyr
 50 55 60
 Ala Pro Trp Cys Pro Ser Cys Gln Gln Thr Asp Ser Glu Trp Glu
 65 70 75
 Ala Phe Ala Lys Asn Gly Glu Ile Leu Gln Ile Ser Val Gly Lys
 80 85 90
 Val Asp Val Ile Gln Glu Pro Gly Leu Ser Gly Arg Phe Phe Val
 95 100 105
 Thr Thr Leu Pro Ala Phe Phe His Ala Lys Asp Gly Ile Phe Arg
 110 115 120
 Arg Tyr Arg Gly Pro Gly Ile Phe Glu Asp Leu Gln Asn Tyr Ile
 125 130 135
 Leu Glu Lys Lys Trp Gln Ser Val Glu Pro Leu Thr Gly Trp Lys
 140 145 150
 Ser Pro Ala Ser Leu Thr Met Ser Gly Met Ala Gly Leu Phe Ser
 155 160 165

Ile Ser Gly Lys	Ile Trp His Leu His	Asn Tyr Phe Thr Val Thr
170	175	180
Leu Gly Ile Pro	Ala Trp Cys Ser Tyr	Val Phe Phe Val Ile Ala
185	190	195
Thr Leu Val Phe	Gly Leu Phe Met Gly	Leu Val Leu Val Val Ile
200	205	210
Ser Gln Cys Phe	Tyr Val Pro Leu Pro	Arg His Leu Ser Glu Arg
215	220	225
Ser Gln Gln Asn	Arg Arg Ser Glu Glu	Ala His Arg Ala Glu Gln
230	235	240
Leu Gln Asp Ala	Glu Glu Glu Lys Asp	Asp Ser Asn Glu Glu Glu
245	250	255
Asn Lys Asp Ser	Leu Val Asp Asp Glu	Gln Glu Lys Glu Asp Leu
260	265	270
Gly Asp Glu Asp	Gln Ala Glu Glu Glu	Gln Glu Glu Asp Asn Leu
275	280	285
Ala Ala Gly Val	Asp Glu Glu Arg Ser	Gln Ala Asn Asp Gln Gly
290	295	300
Pro Pro Gly Glu	Asp Gly Val Thr Arg	Gln Glu Val Glu Pro Glu
305	310	315
Gln Ala Glu Glu	Gly Ile Ser Glu Gln	Pro Cys Pro Ala Asp Thr
320	325	330
Gln Val Val Glu	Asp Ser Leu Arg Gln	Arg Lys Ser Gln His Ala
335	340	345
Asp Lys Gly Leu		

c2100 473
 c2110 24
 c2120 DNA
 c2130 Artificial Sequence

c2200
 c2230 Synthetic oligonucleotide probe

c2200 473
 gttcaatccca tgaccgactc caac 24

c2100 474
 c2110 24
 c2120 DNA
 c2130 Artificial Sequence

c2200

<123> Synthetic oligonucleotide probe

<400> 474

ctctctcat ccacaccagc agcc 24

<110> 475

<111> 44

<112> DNA

<113> Artificial Sequence

<120>

<123> Synthetic oligonucleotide probe

<400> 475

gtggatgctg aaattttacg cccatgggtg tccatcctgc cagc 44

<110> 476

<111> 2473

<112> DNA

<113> Homo sapiens

<400> 476

atctgggtga actacttaag ctttaattgt taaaactcgg taagtacctt 50
gccacatga ttgactcag agattctctt ttgtccacag acagtcactt 100
caggggcaga aagaaaagag ctcccaaatg ctatatctat tcaggggctc 150
tcaagaacaa tggaaatcca tcttgattta gaaaatttgg atgaagatgg 200
atatactcaa ttacacttgc actctcaaaag caataccagg atagctgttg 250
cttcagagaa aggatcgtgt gctgcctctc ctctctgggg cctcatttgt 300
gttaattitgg gaactctatg ctttgtaata ctggtgatag ctgtggctct 350
gggtaccatg ggggttctct ccagcccttg tctctctaatt tggattatat 400
atgagaagag ctgttatcta ttccagcatgt cactaaattc ctggggatgga 450
agtaaaagac aatgctggca actgggctct aatctctcaa agatagacag 500
ctcaaatgaa ttgggattta tagtaaaaca agtgtcttcc caacctgata 550
attcattttg gatagggcct ctctggcccc agactgaggt accatggctc 600
tgggagggatg gatcaacatt ctctctctaac ttatttcaga tcagaaccc 650
agctacccaa gaaaacccat ctcccaattg tgtatggatt cactgtccag 700
tcattttatga ccaactgtgt agtgtgctct catatagtat ttgtgagaag 750
aagttttcaa tgaagagga agggtggaaga aggagagaga aatatgtgag 800
gtagtaagga ggcagaaaa cagaacagaa aagagtaaca gctgaggtca 850
agataaatgc agaaaatgtt tagagagctt ggccaactgt aatcttaacc 900

aagaaattga agggagaggg tgtgatttct gtatttgtcg acctacaggt 950
aggctagtat tattttttctt gttagtagat ccttagacat ggaatcaggg 1000
cagccaagct tgagttttta ttttttattt atttattttt ttgagatagg 1050
gtctcaattt gttacccagg ctggagtgca gtggcacaat ctogaactca 1100
tgcagctatc tctogctca gccctcaag tagctgggac tacaggtgca 1150
tgcacccatg ccaggctaat ttttgggtgt tttgttagag actgggtttt 1200
gccatgttga ccaagctggt ctctaaactc tgggcttaag tgatctgccc 1250
gcttggctt cccaaagtgc tgggattaca gatgtgagcc accacacctg 1300
gccccaaagt tgaattttta ttttgccatt gaattggcat ttaccttggg 1350
taagccataa ggaattttta atttctgggt ctatcagagt tgtttcatgc 1400
tcaacaatgc cattgaagtg cagggtgtgt tgcacgatt tgacctcaa 1450
ctctagcag tatatcagtc atgaactgag ggtgaaatat atttctgaat 1500
agctaaatga agaaatggga aaaaattctt accacagtca gagcaatttt 1550
attattttta tcagtatgat cataattatg attatcatct tagtaaaaaa 1600
caggaactcc tactttttct ctatcaatta aatagctcag agagtacata 1650
tgcacatctt ctaatagaat cttttttttt tttttttctt ttgagacag 1700
agtttcgtct ttgttgccca ggtggagtg caacggccag atctcggctc 1750
acggcaactt ccgccccctg ggttcaagca attctctgc ctcagctctc 1800
caagtatctg ggattacagt caggcaccac cacacccggc taatttttga 1850
tttttttagt agagacaggg tttctccatg cgggtcaggg tagtccgaa 1900
ctctgacct caagtgatct gctgctctcg gctcccaag tctgggatt 1950
acagggttga gccactgcac ccagctaga atcttgata atatgtaatt 2000
gtagggaaa cgtctctata ggaaagtctt ctgcttttta aatacaaaaa 2050
tacataaaaa tacataaaat ctgatgatga atataaaaa gtaaccaacc 2100
tcattgggaa aagtattaac attttggaat atgttttatt agtttttga 2150
tgtactgtt tacaattttt accatctttt tcagtaatta ctgtaaaatg 2200
gtattatttg aatgaaacta tatttctca tgtctgatt tgttttatt 2250
ttttcatact ttccactgg tctattttt atttcaatg gatattttct 2300

tattactagg gaggcattta cagtcctcta atgttgatta atatgtgaaa 2350
 agaaattgta ccaattttac taaattatgc agttttaaatt ggatgatttt 2400
 atgttatgtg gatttcattt caataaaaaa aaacttttat caaaaaaaaa 2450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaa 2478

<210> 477
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 477
 Met Glu Tyr His Pro Asp Leu Glu Asn Leu Asp Glu Asp Gly Tyr
 1 5 10 15
 Thr Gln Leu His Phe Asp Ser Gln Ser Asn Thr Arg Ile Ala Val
 20 25 30
 Val Ser Glu Lys Gly Ser Cys Ala Ala Ser Pro Pro Trp Arg Leu
 35 40 45
 Ile Ala Val Ile Leu Gly Ile Leu Cys Leu Val Ile Leu Val Ile
 50 55 60
 Ala Val Val Leu Gly Thr Met Gly Val Leu Ser Ser Pro Cys Pro
 65 70 75
 Pro Asn Trp Ile Ile Tyr Glu Lys Ser Cys Tyr Leu Phe Ser Met
 80 85 90
 Ser Leu Asn Ser Trp Asp Gly Ser Lys Arg Gln Cys Trp Gln Leu
 95 100 105
 Gly Ser Asn Leu Leu Lys Ile Asp Ser Ser Asn Glu Leu Gly Phe
 110 115 120
 Ile Val Lys Gln Val Ser Ser Gln Pro Asp Asn Ser Phe Trp Ile
 125 130 135
 Gly Leu Ser Arg Pro Gln Thr Glu Val Pro Trp Leu Trp Glu Asp
 140 145 150
 Gly Ser Thr Phe Ser Ser Asn Leu Phe Gln Ile Arg Thr Thr Ala
 155 160 165
 Thr Gln Glu Asn Pro Ser Pro Asn Cys Val Trp Ile His Val Ser
 170 175 180
 Val Ile Tyr Asp Gln Leu Cys Ser Val Pro Ser Tyr Ser Ile Cys
 185 190 195
 Glu Lys Lys Phe Ser Met
 200

<210> 478

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 473
gtccacagac agtcattcca ggagcag 27

<210> 479
<211> 20
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 479
acaagtgctc tcccaacctg 20

<210> 480
<211> 24
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 480
tatctccag agccatggta cctc 24

<210> 481
<211> 81
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 481
cccaagatag ctgttgcttc agagaaagga tcgtgtgctg catctcctcc 50

t 51

<210> 482
<211> 1819
<212> RNA
<213> Homo sapiens

<400> 482
gggaaggagg gagcaggcca cacaggcaca ggccgggtgag ggacctgcc 50
agacctggag ggtctcgctc cgtcacacag gctggagtg agtggtgtga 100
tcttgctca tcgtaacctc cactcccggt gttcaagtga ttctcatgcc 150

tcagcctccc gagtagctgg gattacaggt ggtgacttcc aagagtgaat 200
 ccgtcggagg aaaatgactc ccagtcgct gctgcagaag acaactgttcc 250
 tgotgagttc gctcttcttg gtccaaggtg cccacggcag gggccacagc 300
 gaagactttc gcttctgtag ccagcgggac cagacacaca ggagcagcct 350
 ccactacaaa cccacacag aactggcgtat ctccatcgag aactccgaag 400
 aggcctccac agtccatgac cctttccctg cagcccaccc tgcctccaga 450
 ccttcccttg acccagggg cctctaccac ttctgcctct actgggaaccg 500
 acatgctggg agattacatc ttctctatgg caagcgtgac ttcttgctga 550
 gtgaacaaag ccttagcttc ctctgcttcc agcacccaggc ggagagcctg 600
 gctcaggggc ccccgctgtt agccactctt gtcacctctt ggtggagccc 650
 tcagaacatc agcctgcccc gtgcgcgcag ctccaccttc ccttccaca 700
 gtccctccca ccggccgctt cacaatgctt cggcggacat gtcgcagctc 750
 aaaagggaac cccagctgct cagccagttc ctgaagcatc cccagaaggc 800
 ctcaaggagc cctcggctg cccccgcag ccagcagttg cagagcctgg 850
 agtcgaaact gacctctgtg agattcatgg gggacatggt gtccttcgag 900
 gaggaacgga tcaacgcac cgtgtggaag ctccagccca cagccggcct 950
 ccaggacctg cacatccact cccggcagga ggaggagcag agcgagatca 1000
 tggagtaact ggtgctgctg cctcgaacac tcttcagag gacgaaaggc 1050
 cggagcgggg aggtcgagaa gagaactctc ctggcggact tcagcagcca 1100
 agccctgttc caggacaaga attccagcca agtccctgggt gagaaggctc 1150
 cggggtctgt ggtacagaac accaaagtag ccaacctcac ggagccctg 1200
 gtgctcactt tccagcaca gctacagccg aagaatgtga ctctgcaatg 1250
 tctgtctctg gtcgaagacc ccacattgag cagcccgggg cattggagca 1300
 gctctgggtg tgagacgctc aggaagagaa cccaaacatc ctgctctctg 1350
 aaccacttga cctactttgc agtgcgtgag gctcctctgg tggaggtgga 1400
 cgcctgcac aagcactacc tcagcctcct ctccatcgtg ggtcgtgtcg 1450
 tctctgcccc ggcctgcctt gtcaccattg ccgcctacct ctgctccagg 1500
 gtgcctctgc cgtgcaggag gaaacctcgg gactacacca tcaaggtgca 1550
 catgaacctg ctgctggccg tcttctgct ggacacgagc ttctgtctca 1600

gagagacgggt ggacacgaca ggctctgagg ctggctgacg agacagtgc 1650
atcttcctgc actctccctt gctcacctga ctttcttga tgggacctga 1700
gggtacaaac ctctacggac tcttgggtgga ggtctcttgg accatctgc 1750
ctggctacct actcaagctg agcgcacatgg gctggggctt ccccatcttt 1800
ctggctgacg tggctggcctt ggtggatgtg gacaaactat gcccacatcat 1850
cttggctgtg cataggactc cagagggggt catctacccc cccatgtgct 1900
ggatccggga ctccctgggt agctacatca ccaacctggg cctcttcaga 1950
ctggctgttc tgtccaaat ggccatgcta gcccacatgg tggctgagat 2000
cctggggctg cgcacacaca cccaaaagtg gtacatgtg ctgacactgc 2050
tgggacctag cctggctcctt ggctgacctt gggacctgac cttctctctc 2100
cttctctctg gcacctctca gcttctctgt ctctaccttt ccagcatcat 2150
cacctccttc caaggcttcc ccatcttcac ctggtaactgg cccatggggc 2200
tgcaggcccc gggctggccc cccctctga agagcaactc agacagcgcc 2250
aggctcccca ccagctcggg cagcacctcg ccagccgca cctaggacct 2300
cagcccactt gccatgtga tgaagcagag atggggctc gtccacact 2350
gctgtggcc cccagacag gccagcccc aggcacgtca gccgacact 2400
ctggaaaagc caacgacat ggagagatgg gctgtgcca tggctggacgg 2450
actccggggc tgggtctttt aattggcctt ggggaactact cggctctcac 2500
ccagctccca cgggaactcag aagtggcgcg ccatgtgtcc taggtaactg 2550
ccccacatc tgtcccaacc cagctggagg cctggctctt ccttacaacc 2600
cctgggcccc gccctcattg ctgggggcca ggcttggac cttgagggtc 2650
tggcacatcc ttaatctgt gcccttgctt gggacagaaa tgtggctcca 2700
gttctctgt ctctgttgt caccctgagg gaactctga tctctgtca 2750
tttcaacctc aggtggcacc caggggcaat gggggccagg gcagaccttc 2800
agggcacag ccttggcgga ggagaggccc ttggccagga gcacagcagc 2850
agctcgctca cctctgagcc caggccccct cctccctca gcccccagtc 2900
cctccctcca tctccctgg ggtctctctc ctctccagg gctccttgc 2950
tcttcttcc acagctgggg gtccccgatt ccaatgtgt tttttgggga 3000

gtgggtttcca ggagctgect ggtgtctgct gtaaatgttt gtctactgca 3050
 caagcctcgg cctgccccctg agccaggctc ggtaacgatg cgtgggctgg 3100
 cctaggtccc cctgtccatc tgggccccctg tatgagctgc attgccccctg 3150
 ctcacccctga ccaagcacac gcttcagagg ggccctcagc ctctccctgaa 3200
 cccctcttgt ggcaagaact gtggaccatg ccagtcctgt ctgggtttcca 3250
 tccacccact ccaaggactg agactgacct cctctgggtga cactggccta 3300
 cagcctgaca ctctccctaag aggttctctc caagccccca aatagctcca 3350
 gggccccctg ggcccccata atgggttaatt ctgtcccaaa aacacacacg 3400
 ggtagattgc tggcctgttg taggtggtag ggacacagat gacccgacctg 3450
 gtcactctc ctgccaacat tcagtcctgt atgtgaggcg tgggtgaagc 3500
 aagaactcct ggagctacag ggacagggag ccacattcc tgcctgggaa 3550
 tcttggaaga ctctctgcag gactcagcgt ccaatcttga ccttgaagat 3600
 gggaaggatg tctcttttac gtaccaatto ctttgtctct tcatattaaa 3650
 cagaagtaca tgttcattgt agagaatttg gaaactgtg aagagaatca 3700
 cgaagaaaaa taaaaatrag ctgttgtaat cgcctagcaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3800
 aaaaaaaaaa aaaaaaaaaa 3819

<210> 483
 <211> 693
 <212> PRT
 <213> Homo sapiens

<400> 483
 Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser
 1 5 10 15
 Leu Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu
 20 25 30
 Asp Phe Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser
 35 40 45
 Leu His Tyr Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn
 50 55 60
 Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His
 65 70 75
 Pro Ala Ser Arg Ser Phe Pro Asp Pro Arg Gly Leu Tyr His Phe
 80 85 90

Cys	Leu	Tyr	Trp	Asn	Arg	His	Ala	Gly	Arg	Leu	His	Leu	Leu	Tyr	105
				105					100						
Gly	Lys	Arg	Asp	Phe	Leu	Leu	Ser	Asp	Lys	Ala	Ser	Ser	Leu	Leu	110
				110					115						
Cys	Phe	Gln	His	Gln	Glu	Glu	Ser	Leu	Ala	Gln	Gly	Pro	Pro	Leu	125
				125					130						
Leu	Ala	Thr	Ser	Val	Thr	Ser	Trp	Trp	Ser	Pro	Gln	Asn	Ile	Ser	140
				140					145						
Leu	Pro	Ser	Ala	Ala	Ser	Phe	Thr	Phe	Ser	Phe	His	Ser	Pro	Pro	155
				155					160						
His	Thr	Ala	Ala	His	Asn	Ala	Ser	Val	Asp	Met	Cys	Gln	Leu	Lys	170
				170					175						
Arg	Asp	Leu	Gln	Leu	Leu	Ser	Gln	Phe	Leu	Lys	His	Pro	Gln	Lys	185
				185					190						
Ala	Ser	Arg	Arg	Pro	Ser	Ala	Ala	Pro	Ala	Ser	Gln	Gln	Leu	Gln	200
				200					205						
Ser	Leu	Glu	Ser	Lys	Leu	Thr	Ser	Val	Arg	Phe	Met	Gly	Asp	Met	215
				215					220						
Val	Ser	Phe	Glu	Glu	Asp	Arg	Ile	Asn	Ala	Thr	Val	Trp	Lys	Leu	230
				230					235						
Gln	Pro	Thr	Ala	Gly	Leu	Gln	Asp	Leu	His	Ile	His	Ser	Arg	Gln	245
				245					250						
Glu	Glu	Glu	Gln	Ser	Glu	Ile	Met	Glu	Tyr	Ser	Val	Leu	Leu	Pro	260
				260					265						
Arg	Thr	Leu	Phe	Gln	Arg	Thr	Lys	Gly	Arg	Ser	Gly	Glu	Ala	Glu	275
				275					280						
Lys	Arg	Leu	Leu	Leu	Val	Asp	Phe	Ser	Ser	Gln	Ala	Leu	Phe	Gln	290
				290					295						
Asp	Lys	Asn	Ser	Ser	Gln	Val	Leu	Gly	Glu	Lys	Val	Leu	Gly	Ile	305
				305					310						
Val	Val	Gln	Asn	Thr	Lys	Val	Ala	Asn	Leu	Thr	Glu	Pro	Val	Val	320
				320					325						
Leu	Thr	Phe	Gln	His	Gln	Leu	Gln	Pro	Lys	Asn	Val	Thr	Leu	Gln	335
				335					340						
Cys	Val	Phe	Trp	Val	Glu	Asp	Pro	Thr	Leu	Ser	Ser	Pro	Gly	His	350
				350					355						
Trp	Ser	Ser	Ala	Gly	Cys	Glu	Thr	Val	Arg	Arg	Glu	Thr	Gln	Thr	365
				365					370						

Ser Cys Phe Cys Asn His Leu Thr Tyr Phe Ala Val Leu Met Val	385	390
Ser Ser Val Glu Val Asp Ala Val His Lys His Tyr Leu Ser Leu	395	400
Leu Ser Tyr Val Gly Cys Val Val Ser Ala Leu Ala Cys Leu Val	410	420
Thr Ile Ala Ala Tyr Leu Cys Ser Arg Val Pro Leu Pro Cys Arg	425	435
Arg Lys Pro Arg Asp Tyr Thr Ile Lys Val His Met Asn Leu Leu	440	450
Leu Ala Val Phe Leu Leu Asp Thr Ser Phe Leu Leu Ser Glu Pro	465	465
Val Ala Leu Thr Gly Ser Glu Ala Gly Cys Arg Ala Ser Ala Ile	470	480
Phe Leu His Phe Ser Leu Leu Thr Cys Leu Ser Trp Met Gly Leu	485	495
Glu Gly Tyr Asn Leu Tyr Arg Leu Val Val Glu Val Phe Gly Thr	500	510
Tyr Val Pro Gly Tyr Leu Leu Lys Leu Ser Ala Met Gly Trp Gly	515	525
Phe Pro Ile Phe Leu Val Thr Leu Val Ala Leu Val Asp Val Asp	530	540
Asn Tyr Gly Pro Ile Ile Leu Ala Val His Arg Thr Pro Glu Gly	545	555
Val Ile Tyr Pro Ser Met Cys Trp Ile Arg Asp Ser Leu Val Ser	560	570
Tyr Ile Thr Asn Leu Gly Leu Phe Ser Leu Val Phe Leu Phe Asn	575	585
Met Ala Met Leu Ala Thr Met Val Val Glu Ile Leu Arg Leu Arg	590	600
Pro His Thr Gln Lys Trp Ser His Val Leu Thr Leu Leu Gly Leu	605	615
Ser Leu Val Leu Gly Leu Pro Trp Ala Leu Ile Phe Phe Ser Phe	620	630
Ala Ser Gly Thr Phe Gln Leu Val Val Leu Tyr Leu Phe Ser Ile	635	645
Ile Thr Ser Phe Glu Gly Phe Leu Ile Phe Ile Trp Tyr Trp Ser	650	660

Met Arg Leu Gln Ala Arg Gly Gly Pro Ser Pro Leu Lys Ser Asn
665 670 675

Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr Ser Ser
680 685 690

Ser Arg Ile

<210> 484
<211> 516
<212> DNA
<213> Homo sapiens

<214>
<215> unsure
<216> 64, 70, 84, 147
<217> unknown base

<400> 484
tgcctggcct gccttgccaa caatgcctct tactctgctt ccaggcttgc 50
ctgccttgca gaggaaanct tcgggactac accttcaagt gcacatgaac 100
atgctgtgtg ccgtcttctt gctggacaag agcttctctg ccagcgnaga 150
ccgtggcctt gacaggctct gaaggctggc tgcagagcca gtgcctcttt 200
cttgcacttc cctgtctaac ctgccttttc tggatggggc tcgaggggta 250
caacctctac cgactcgtgg tggaggtctt tggcacttat gtccctggct 300
acctactcaa gctgagcgcc atgggctggg gcttcccat cttctcggtg 350
acgctcgtgg cctgggtgga tgtggacaac tatggcccca tcctcttggc 400
tgtgcctagg actccagagg ggtcctctta ccttccatg tgcctggatc 450
aggactcctt ggtcagctac atcaccaccc tgggcctctt cagcctggtg 500
ttctgttca acatgg 516

<210> 485
<211> 22
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 485
ggcatttcag cagtgcctgg tg 22

<210> 486
<211> 24
<212> DNA

<013> Artificial Sequence

<020>

<005> Synthetic oligonucleotide probe

<010> 486

tgaggagcta gatggggctg gacg 24

<010> 487

<011> 2849

<012> DNA

<013> Homo sapiens

<020>

<021> unsure

<022> 2715

<023> unknown base

<010> 487

gggagggctg ggggagggg tggggggagc cgtggggcga cgggtgggct 50

gggttcaggctc cagggttttg ttgatccctt ttcaaaaact ggagacacag 100

agagaggctc taggaaaaag ttttggatgg gattatgtgg aaactaccct 150

gggtttctct gctggcagag caggctgggc gcttcacccc cagtgcagcc 200

ttcccctggc ggtgggtgaaa gagaactggg agtcgctgct tccaaagtcg 250

cggccttgag tgagctctca cccagtcag ccaaatgagc ctcttcgggc 300

ttctctctgt gacatctgcc ctggccgggc agagacaggg gactcaggcg 350

gaatccaccc tgagtagtaa attccagttt cccagcaaca aggaacagaa 400

gggagtcaca gatctcagc atgagagaat tattactgtg ctactaatg 450

gaagtattca cagcccaagg tttctcata ctatccaaag aaatacgggc 500

ttggtatgga gattagtgc agtagaggaa aatgtatgga tacaacttac 550

gtttgatgaa agatttgggc ttgaagaccc agaagatgac atatgcaagt 600

atgatittgt agaagttgag gaaccacgtg atggaaactat attagggggc 650

tgggttggtt ctggtaactgt accaggaaaa cagatttcta aaggaaatca 700

aattangata agatttgtat ctgatgaata ttttccttct gaaccagggt 750

cttgcatcca ctacaacatt gtcatgcac aattcacaga agctgtgagt 800

ccctcagtcg taccoccttc agctttgcac ctggacctgc ttaataatgc 850

tataactgac tttagtacct tgggaagacct tattcgatat ctggaaccag 900

agagatggca gttggactta gaagatctat ataggccaac ttggcaactt 950

ottggcaagg cttttgtttt tgggaagaaa tccagagtgg tggatctgaa 1000
 ccttctaaca gaggaggtaa gattatacag ctgcacacct cgttaactct 1050
 cagtgtccat aagggaagaa ctaaagagaa ccgataccat tttctggcca 1100
 ggttgtctcc tgggttaaag ctgtggtggg aactgtgctt gttgtctcca 1150
 caattgcaat gaatgtcaat gtgtcccaag caaagttact aaaaaatacc 1200
 acgaggtcct ccagctgaga ccaaagaccg gtgtcagggg attgcacaaa 1250
 tcaactcacc acgtgggcct ggagcaccat gaggagtgtg actgtgtgtg 1300
 cagagggagc acaggaggat agccgcacca ccaccagcag ctcttgccca 1350
 gagctgtgca gtgcagtggc cgattctatt agagaacgta tgggttacct 1400
 ccacccctaa tctcagttgt ctgctccaag gacctttcat ctccaggatt 1450
 tacagtgcac tctgaaagag gagacatcaa acagaattag gagttgtgca 1500
 acagctcttt tgagaggagg cctaaaggac aggagaaaag gtctccaatt 1550
 gtggaaagaa aattaaatgt tgtattaaat agatcaccag ctagtctcag 1600
 agttaaccatg taagtattcc actagctggg ttctgtattt cagttctctc 1650
 gatacggctt agggtaatgt cagtacagga aaaaaactgt gcaagtgagc 1700
 acctgattcc gttgccttgc ttaactctaa agctccatgt cctgggccta 1750
 aaatcgtata aaatctggat tttttttttt ttttttgctc atattccatc 1800
 atgtaaaacca gaacattcta tgtactacaa acctggtttt taaaaaggaa 1850
 ctatgttgcct atgaattaaa cctgtgtcat gctgatagga cagaactggat 1900
 cttccatatt tcttattaaa attctcgcca tttagaagaa gagaactaca 1950
 ttcctggctt ggaagagata aacctgaaaa gaagagtggc ctctatctca 2000
 cttctatgat aagtcagttt atttgtttca ttgtgtacat ttttatctc 2050
 cctttttgac attataactg ttggcttttc taactctggt aaatatatct 2100
 atttttacca aaggtatttt atattctttt ttatgacaac cttagatcaac 2150
 tacttttagc ttggttaaatt ttctaaaca caattgttat agccagagga 2200
 acaagatga tataaaatat tgttgccttg aaaaaatat atgtatttca 2250
 cctctgtatg gtgctagagt tagattaatc tgcattttaa aaaaactgaat 2300
 tggaatagaa ttggttaagtt gcaagactt tttgaaaata attaaattat 2350
 catatcttcc attcctgtta ttggagatga aaataaaaag caacttatga 2400

aagtagaat tcagatccag ccattactaa cctattcctt ttttggggaa 2450
atctgagcct agctcagaaa aacataaagc accttgaaaa agacttggca 2500
gtctcttgat aaagcgtgct gtgctgtgca gtaggaacac atcctattta 2550
ttgtgatgtt gtgggtttat tatcttaaac cctgttccat acaattgtat 2600
aaatacatgg atatttttat gtacagaagt atgtctctta accagttcac 2650
ctattgtact ctggcaattt aaaagaaaat cagtataata ttttgcttgt 2700
aaaatgctta atatngtgcc taggttatgt ggtgactatt tgaatcaaaa 2750
atgtattgaa tcatacaata aaagaatgtg gctattttgg ggagaaaatt 2800
aaaaaaaaa aaaaaaaaaa aggttttaggg ataacagggt aatggggcc 2849

<210> 488
<211> 345
<212> PST
<213> Homo sapiens

<400> 488
Met Ser Leu Phe Gly Leu Leu Leu Leu Thr Ser Ala Leu Ala Gly
1 5 10 15
Gln Arg Gln Gly Thr Gln Ala Glu Ser Asn Leu Ser Ser Lys Phe
20 25 30
Gln Phe Ser Ser Asn Lys Glu Gln Asn Gly Val Gln Asp Pro Gln
35 40 45
His Glu Arg Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser
50 55 60
Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp
65 70 75
Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln Leu Thr Phe
80 85 90
Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile Cys Lys
95 100 105
Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile Leu
110 115 120
Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser
125 130 135
Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe
140 145 150
Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro
155 160 165

Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala	170	175	180
Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr	185	191	195
Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu	200	205	210
Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys	215	220	225
Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu	230	235	240
Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe	245	250	255
Ser Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe	260	265	270
Trp Pro Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala	275	280	285
Cys Cys Leu His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys	291	295	300
Val Thr Lys Lys Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr	305	310	315
Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp Val Ala Leu Glu	320	325	330
His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser Thr Gly Gly	335	340	345

<210> 489

<210> 21

<210> DNA

<210> Artificial Sequence

<220>

<220> Synthetic oligonucleotide probe

<400> 489

actctccagt gtccataagg g 21

<410> 420

<411> 40

<412> DNA

<413> Artificial Sequence

<420>

<420> Synthetic oligonucleotide probe

<430> 430

gaactaaaga gaaccgatac cattttctgg ccaggttgtc 40

<210> 491

<211> 20

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 491

caaccacagg ttaaccagg 20

<210> 492

<211> 20

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 492

acacacaggca cagttccccc 20

<210> 493

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 493

gggggaatcc aacctgagta g 21

<210> 494

<211> 20

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 494

gggacatccc tccgtgtgctc 20

<210> 495

<211> 3283

<212> DNA

<213> Homo sapiens

<410> 495

accatctcaa gctgatcttg gacctctca tgetctgctc tcttcaacca 50

gacctctaca ttccattttg gaagaagact aaaaatgggtg ttccaatgt 100

gacactgaa gagacaaatt cttatccttt ttaacataat cctaatttcc 150

aaactccttg gggctagatg gtttcctaaa actctgcctt gtgatgtcac 200
 tctggatgtt ccaaaagaac atgtgatcgt ggactgcaca gacaagcatt 250
 tgacagaaat tcttggaggt attcccacga acacacagaa cctcaccttc 300
 accattaacc acataccaga catctcccca gggtcctttc acagaactgga 350
 ccctctggta gagatcgatt ccagatgcac ctgtgtacct attccactgg 400
 ggtcaaaaaa caacatgtgc atcaagaggt tgcagattaa accbagaagg 450
 tttagtggac tcacttattt aaaatcctt tacttggatg gaaaccagct 500
 actagagata ccgcaggggc tcccgccctag cttacagctt ctacgccttg 550
 aggcacaaca catcttttcc atcagaaaag agaactaac agaactggcc 600
 aacatagaaa tactctacct gggccaaaaa tgttattatc gaaatccttg 650
 ttatgtttca tattcaatag agaaagatgc cttcctaaac ttgacaaagt 700
 caaaagtgtt ctccctgaaa gataacaatg ccacagccgt cctactgtt 750
 ttgcacata ctttaacaga acttatcttc tacaacaaca tgattgcaca 800
 aatccaagaa gatgatttta ataacctcaa ccaattacaa attcttgacc 850
 taagtggaaa ttgcctcctg tgttataatg cccattttcc ttgtggcgcg 900
 tgtaaaaata attctccctt acagatccct gtaaatgctt ttgatcgctt 950
 gacagaatta aaagttttac gtctacacag taactctctt cagcatgtgc 1000
 ccccaagatg gtttaagaac atcaacaaac ccacggaact ggatctgtcc 1050
 caaaactctt tggccaaaga aattggggat gctaaaattc tgcattttct 1100
 cccacgcttc atccaattgg atctgtcttt caattctgaa ctccaggtct 1150
 atctgcctc tatgaattca ccacaagcat tctcttcact gaaaagcctg 1200
 aaaattctgc ggatcagagg atatgtcttt aaagagttga aaagctttaa 1250
 cctctcgcca ttacataatc ctcaaaatct tgaagttctt gatcttggca 1300
 ctaactttat aaaaattgtt aacctcagca tgtttaaaca atttaaaaga 1350
 ctgaaagcca tagatcttcc agtgaataaa atatcacctt caggagattc 1400
 aagtgaagtt ggctctctgt caaatgcacg aactctgtga gaaagttatg 1450
 aaccccaggt cctggaacaa ttacattact tcagatatga taagtatgca 1500
 aggagtgtga gattcaaaaa caaagaggct tctttcatgt ctgttaatga 1550

aagctgctac aagtatgggc agacottgga totaagtaaa aatagtatat 1600
tttttgtcaa gtcoctotgat tttcagcacc tttotttcoct caaatgcoctg 1650
aatctgtcag gaaatctcat tagcctaaact cttaatggca gtgaattcca 1700
accttttagca gagctgagat atttggactt ctccaacaaac cggcttgatt 1750
tactccatto aacagcattt gaagagcttc acaaaactgga agttctggat 1800
ataagcagta atagccatta ttttcaatca gaaggaaatta cccatatgct 1850
aaaottttacc aagaacctaa aggttcttga gaaactgatg atgaacgaca 1900
atgacatctc ttcoctccacc agcaggacca tggagagtga gtctctttaga 1950
actctgggaat tcagaggaaa tcaattagat gtcttatgga gagaagggtga 2000
taacagatac ttacaattat tcaagaatct gctaaaatta gaggaattag 2050
acatctctaa aaattcccta agtttcttga cttctggagt ctttgatggt 2100
atgcoctccaa atctaaagaa tctctctttg gccaaaaatg ggtccaaatc 2150
tttcagttgg aagaaaacctc agtgtctaaa gaacctggaa accttggacc 2200
tcagccacaa ccaactgacc actgtccctg agagattatc caactgttcc 2250
agaagctcca agaattctgat tottaagaat aatcaaatca ggagtctgac 2300
gaagtatttt ctacaagatg ccttcacgtt gogatatctg gatctcagct 2350
caaataaaaat ccagatgata caaaagacca gcttccaga aaatgtcttc 2400
aacaattctga agatgttctt tttgcacat aatcgggttc tgtgcacctg 2450
tgatgctgtg tggtttctct ggtgggttaa ccatacggag gtgactatcc 2500
cttacctgga cacagatgtg acctgtgttg ggcacggagc acacaaggga 2550
caagtggtga tctccctgga tctgtacacc tgtgagttag atctgactaa 2600
cctgattctg tctccattt ccatatctgt acctctcttt ctcatggga 2650
tgatgacaga aagtcacctc tattctctggg atgtgtggta tatttacct 2700
ctctgtaagg ccaagataaa ggygtatcag cgtctaatat caccagaactg 2750
ctgctatgat gcttttattg tgtatgacac taaagaccca gctgtgaccc 2800
agtgggtttt ggtgagctg gtg-gccaaac tggaaagacc aagagagaaa 2850
catttcaatt catgtctga ggaagggaac tggttaccag ggcagccagt 2900
cttgaaaaac ctttccaga gcatacagct tagcaaaaag acagtgtttg 2950
tgatgacaga caagtatga aagactgaaa attttaagat agcattttac 3000

ttgtcccatc agaggctcat ggatgaaaaa gttgatgtga ttatcttgat 3050
 atttcttgag aagcccttcc agaagtcbaa gttctctcag ctccggaaaa 3100
 ggcctctgtgg gagttctgtc ctgagtgagg caacaaaccc gcaagctcac 3150
 ccatacttct ggcagtgctc aaagaacgcc ctggccacag acaatcatgt 3200
 ggccctatagt caggtgttca aggaaaaggc ctagcccttc ttgcaaaaac 3250
 acaactgcct agtttaccac ggagaggcct ggc 3283

<110> 496
 <110> 1049
 <110> PRT
 <110> Homo sapiens

<400> 496
 Met Val Phe Pro Met Trp Thr Leu Lys Arg Gln Ile Leu Ile Leu
 1 5 10 15
 Phe Asn Ile Ile Leu Ile Ser Lys Leu Leu Gly Ala Arg Trp Phe
 20 25 30
 Pro Lys Thr Leu Pro Cys Asp Val Thr Leu Asp Val Pro Lys Asn
 35 40 45
 His Val Ile Val Asp Cys Thr Asp Lys His Leu Thr Glu Ile Pro
 50 55 60
 Gly Gly Ile Pro Thr Asn Thr Thr Asn Leu Thr Leu Thr Ile Asn
 65 70 75
 His Ile Pro Asp Ile Ser Pro Ala Ser Phe His Arg Leu Asp His
 80 85 90
 Leu Val Glu Ile Asp Phe Arg Cys Asn Cys Val Pro Ile Pro Leu
 95 100 105
 Gly Ser Lys Asn Asn Met Cys Ile Lys Arg Leu Gln Ile Lys Pro
 110 115 120
 Arg Ser Phe Ser Gly Leu Thr Tyr Leu Lys Ser Leu Tyr Leu Asp
 125 130 135
 Gly Asn Gln Leu Leu Glu Ile Pro Gln Gly Leu Pro Pro Ser Leu
 140 145 150
 Gln Leu Leu Ser Leu Glu Ala Asn Asn Ile Phe Ser Ile Arg Lys
 155 160 165
 Glu Asn Leu Thr Glu Leu Ala Asn Ile Glu Ile Leu Tyr Leu Gly
 170 175 180
 Gln Asn Cys Tyr Tyr Arg Asn Pro Cys Tyr Val Ser Tyr Ser Ile
 185 190 195

Glu Lys Asp Ala Phe Leu Asn Leu Thr	Lys Leu Lys Val Leu Ser	200	215	211
Leu Lys Asp Asn Asn Val Thr Ala Val	Pro Thr Val Leu Pro Ser	216	220	225
Thr Leu Thr Glu Leu Tyr Leu Tyr Asn	Asn Met Ile Ala Lys Ile	230	235	240
Gln Glu Asp Asp Phe Asn Asn Leu Asn	Gln Leu Gln Ile Leu Asp	245	250	255
Leu Ser Gly Asn Cys Pro Arg Cys Tyr	Asn Ala Pro Phe Pro Cys	260	265	270
Ala Pro Cys Lys Asn Asn Ser Pro Leu	Gln Ile Pro Val Asn Ala	275	280	285
Phe Asp Ala Leu Thr Glu Leu Lys Val	Leu Arg Leu His Ser Asn	290	295	300
Ser Leu Gln His Val Pro Pro Arg Trp	Phe Lys Asn Ile Asn Lys	305	310	315
Leu Gln Glu Leu Asp Leu Ser Gln Asn	Phe Leu Ala Lys Glu Ile	320	325	330
Gly Asp Ala Lys Phe Leu His Phe Leu	Pro Ser Leu Ile Gln Leu	335	340	345
Asp Leu Ser Phe Asn Phe Glu Leu Gln	Val Tyr Arg Ala Ser Met	350	355	360
Asn Leu Ser Gln Ala Phe Ser Ser Leu	Lys Ser Leu Lys Ile Leu	365	370	375
Arg Ile Arg Gly Tyr Val Phe Lys Glu	Leu Lys Ser Phe Asn Leu	380	385	390
Ser Pro Leu His Asn Leu Gln Asn Leu	Glu Val Leu Asp Leu Gly	395	400	405
Thr Asn Phe Ile Lys Ile Ala Asn Leu	Ser Met Phe Lys Gln Phe	410	415	420
Lys Arg Leu Lys Val Ile Asp Leu Ser	Val Asn Lys Ile Ser Pro	425	430	435
Ser Gly Asp Ser Ser Glu Val Gly Phe	Cys Ser Asn Ala Arg Thr	440	445	450
Ser Val Glu Ser Tyr Glu Pro Gln Val	Leu Glu Gln Leu His Tyr	455	460	465
Phe Arg Tyr Asp Lys Tyr Ala Arg Ser	Cys Arg Phe Lys Asn Lys	470	475	480

Glu Ala Ser Phe Met Ser Val Asn Glu Ser Cys Tyr Lys Tyr Gly	485	490	495
Gln Thr Leu Asp Leu Ser Lys Asn Ser Ile Phe Phe Val Lys Ser	500	505	510
Ser Asp Phe Gln His Leu Ser Phe Leu Lys Cys Leu Asn Leu Ser	515	520	525
Gly Asn Leu Ile Ser Gln Thr Leu Asn Gly Ser Glu Phe Gln Pro	530	535	540
Leu Ala Glu Leu Arg Tyr Leu Asp Phe Ser Asn Asn Arg Leu Asp	545	550	555
Leu Leu His Ser Thr Ala Phe Glu Glu Leu His Lys Leu Glu Val	560	565	570
Leu Asp Ile Ser Ser Asn Ser His Tyr Phe Gln Ser Glu Gly Ile	575	580	585
Thr His Met Leu Asn Phe Thr Lys Asn Leu Lys Val Leu Gln Lys	590	595	600
Leu Met Met Asn Arg Asn Asp Ile Ser Ser Ser Thr Ser Arg Thr	605	610	615
Met Glu Ser Glu Ser Leu Arg Thr Leu Glu Phe Arg Gly Asn His	620	625	630
Leu Asp Val Leu Trp Arg Glu Gly Asp Asn Arg Tyr Leu Gln Leu	635	640	645
Phe Lys Asn Leu Leu Lys Leu Glu Glu Leu Asp Ile Ser Lys Asn	650	655	660
Ser Leu Ser Phe Leu Pro Ser Gly Val Phe Asp Gly Met Pro Pro	665	670	675
Asn Leu Lys Asn Leu Ser Leu Ala Lys Asn Gly Leu Lys Ser Phe	680	685	690
Ser Trp Lys Lys Leu Gln Cys Leu Lys Asn Leu Glu Thr Leu Asp	695	700	705
Leu Ser His Asn Gln Leu Thr Thr Val Pro Glu Arg Leu Ser Asn	710	715	720
Cys Ser Arg Ser Leu Lys Asn Leu Ile Leu Lys Asn Asn Gln Ile	725	730	735
Arg Ser Leu Thr Lys Tyr Phe Leu Gln Asp Ala Phe Gln Leu Arg	740	745	750
Tyr Leu Asp Leu Ser Ser Asn Lys Ile Gln Met Ile Gln Lys Thr	755	760	765

Ser Phe Pro Glu Asn Val Leu Asn Asn Leu Lys Met Leu Leu Leu	770	775	780
His His Asn Arg Phe Leu Cys Thr Cys Asp Ala Val Trp Phe Val	783	790	795
Trp Trp Val Asn His Thr Glu Val Thr Ile Pro Tyr Leu Ala Thr	800	805	810
Asp Val Thr Cys Val Gly Pro Gly Ala His Lys Gly Gln Ser Val	813	820	825
Ile Ser Leu Asp Leu Tyr Thr Cys Glu Leu Asp Leu Thr Asn Leu	830	835	840
Ile Leu Phe Ser Leu Ser Ile Ser Val Ser Leu Phe Leu Met Val	843	850	855
Met Met Thr Ala Ser His Leu Tyr Phe Trp Asp Val Trp Tyr Ile	860	865	870
Tyr His Phe Cys Lys Ala Lys Ile Lys Gly Tyr Gln Arg Leu Ile	873	880	885
Ser Pro Asp Cys Cys Tyr Asp Ala Phe Ile Val Tyr Asp Thr Lys	890	895	900
Asp Pro Ala Val Thr Glu Trp Val Leu Ala Glu Leu Val Ala Lys	903	910	915
Leu Glu Asp Pro Arg Glu Lys His Phe Asn Leu Cys Leu Glu Glu	920	925	930
Arg Asp Trp Leu Pro Gly Gln Pro Val Leu Glu Asn Leu Ser Gln	933	940	945
Ser Ile Gln Leu Ser Lys Lys Thr Val Phe Val Met Thr Asp Lys	950	955	960
Tyr Ala Lys Thr Glu Asn Phe Lys Ile Ala Phe Tyr Leu Ser His	963	970	975
Gln Arg Leu Met Asp Glu Lys Val Asp Val Ile Ile Leu Ile Phe	980	985	990
Leu Glu Lys Pro Phe Gln Lys Ser Lys Phe Leu Gln Leu Arg Lys	993	1000	1005
Arg Leu Cys Gly Ser Ser Val Leu Glu Trp Pro Thr Asn Pro Gln	1010	1015	1020
Ala His Pro Tyr Phe Trp Gln Cys Leu Lys Asn Ala Leu Ala Thr	1023	1030	1035
Asp Asn His Val Ala Tyr Ser Gln Val Phe Lys Glu Thr Val	1040	1045	

4010 - 497
4011 - 4199
4012 - DNA
4013 - Homo sapiens

4000 - 497
gggtaccatt ctggcgtgct gcaagttacg gaatgaaaaa ttagaacaac 50
agaaacatgg aaaacatggt ccttcagtcg tcaatgctga cctgcatttt 100
cctgctaata tctgggttct gtgagttatg cgcgcgaagaa aatttttcta 150
gaaactatcc ttgtgatgag aaaaagcaaa atgaactcagt cattgcagag 200
tgcagcaacc gtgcactaca ggaagttccc caaacggctgg gcaaatatgt 250
gacagaacca gacctgtctg ataatttcac cacacacata acgaatgaat 300
catttcaagg gctgcaaaat ctcactaaaa taaattctaaa ccacaacccc 350
aatgtacagc accagaacgg aaatcccggt atacaatcaa atggcttgaa 400
tatcacagac ggggcattcc tcaacctaaa aaacctgaag gagttactgc 450
tgcagacaaa ccagttaccc caaatacct ctgggtttgpc agagtctctg 500
acagaactta gtctaattca aaacaatata tacaacataa ctaaagaggg 550
catttcaaga cttataaaat tgaaaaatct ctatttggpc cggaaactgt 600
attttaacaa agtttgogag aaaaactaac tagaagatgg agtatctgaa 650
acgtgacaaa atttggaggt gctatcaact cttttcaatt ctctttcaca 700
cgtgcacccc aaactgcbaa gctccctacg caaacctttt ctgagcaaca 750
ccagatcaa atacattagt gaagaagatt ccaagggatt gataaattca 800
acattactag atttaagcgg gaactgtccg aggtgcttca atgcacacatt 850
tccatggctg ccttctgctg ggggtgcttc aattaatata gatcgtctctg 900
cttttcaaaa cttgacccaa cttcgatacc taaacctctc tagcacttcc 950
ctcaggaaga ttaatgctgc ctggttttaa aatatgcctc atctgaaggt 1000
gctggatctt gaattcaact atttagtggg agaaatagtc cctgggggcat 1050
ttttaacgat gctgcacccc ttagaaatac ttgaattgtc ttttaactat 1100
ataaagggga gttatccaca gcatattaat atttcagaa acctctctaa 1150
accttttgtct ctacgggcat tgcatttaag aggttatgtg ttccaggaac 1200
tcagagaaga tgatttcag cccctgatgc agcttccaaa cttatcgact 1250

atcaacttgg gtattaattt tattaagcaa atcgatttca aactttttcaa 1300
aaattttctcc aatctggaaa ttattttactt gtcagaaaaa agaatatcac 1350
cgttggtaaa agataccggc cagagttatg caaatagttc ctcttttcbaa 1400
cgtcatatcc ggaaaacgacg ctcaacagat tttagagtttg accacacattc 1450
gaacttttat catttcaccc gtcctttaat aaagccacaa tgtgtgtgtt 1500
atggaaaagc cctagattta agcctcaaca gtattttctt cattggggcaa 1550
aaccaatttg aaaatcttcc tgacattgac tgtttaaatc tgtctgcaaa 1600
tagcaatgct caagtgttaa gtggaaatga attttcagcc attcctcatg 1650
ccaaatattt ggatttgaca aacaatagac tagactttga taatgttagt 1700
gtctttactg aattgtccga cctgggaagtt ctagatctca gctataatto 1750
acactatttc agaatagcag gcgtaacaca tcatctagaa ttatttcaaa 1800
atttcacaaa cctaaaagtt ttaaacttga gccacacaaa catttatact 1850
ttaacagata agtataacct ggaaagcaag tccctggtag aattagtctt 1900
cagtggcaat cgccttgaca ttttggggaa tgatgatgac aacaggtata 1950
ctctcatttt caaaggtctc aagaatctga caggtctgga tctatccttt 2000
aataggctga agcacatccc aaatgaagca ttccttaatt tgcacggag 2050
ctcactgaa ctacatataa atgataatat gttaaaagttt tctaaactgga 2100
cattaactcca gcagtttctt cgtctcagat tgccttgactt acgtggaaaac 2150
aaaactactt ttttaactga tagcctatct gactttacat ctctccttctg 2200
gacactgctg ctgagtcata acaggatttc ccacctaccc tctggctttc 2250
ttcttgaagt cagttagctg aagcaactcg atttaagttc caatctgcta 2300
aaaaaatca acaaatccgc acttgaaact aagaccacca ccaaatcttc 2350
tatgttggaa ctacacggaa acccctttga atgcacctgt gacattggag 2400
atttcogaag atggatggat gaacatctga atgtcaaaat tccagactg 2450
gtagatgtca ttgtgtccag tctgggggat caaagaggga agagtattgt 2500
gagtctggag ctaacaaact gtgtttcaga tgcactgca gtgatattat 2550
ttttcttcac gttcttcttc accacatgg ttatgttggc tgccttggct 2600
caccatttgt tttactggga tgtttggttt atatataatg tgtgttttagc 2650
taaggtaaaa ggtacaggt ctctttccac atcccaaaat ttctatgatg 2700

ottacatttc ttatgacacc aaagatgcct ctgttaactga ctgggtgata 2750
aatgagctgc gctaccacct tgaagagagc cgagacaaaa acgtctctct 2800
ttgtctagag gagagggatt gggacccggg attggccatc atcgacaaac 2850
ccatgcagag catcaaccaa agcaagaaaa cagtatttgt ttttaacaaa 2900
aaatatgcaa aaagctggaa ctttaaaaac gctttttact tgggtttgca 2950
gaggctaatt gatgagaaca tggatgtgat tatatttata ctgctggagc 3000
cagtgttaca gcattctcag tatttgagga taaggcagcg gatctgtaag 3050
agctccatcc ccagtgggc tgcacacccg aaggcagaag gcttggtttg 3100
gcacaccccg agaatgtgg tcttgactga aaatgattca cggcataaca 3150
atatgtatgt cgattccatt aagcaatact aactgacgtt aagtcatgat 3200
ttcgcgccat aataaagatg caaaggaatg acattctctgt attagttata 3250
tattgtatg taacaaatta tcccaaaact tagtgggtta aaacaacaca 3300
tttgcgggcc cccagttttt gagggtccag agtccaggcc cagcataact 3350
gggtccctcg ctcagggtgt ctcagaggct gcaatgtagg tgttcaccag 3400
agacatagga atccctgggg ccacactcat gtggttgttt tctggattca 3450
attccctctg ggtatttggc caaaggttat actcatgtaa gccatggag 3500
cctctccacc aaggcagctt gcttcactag agctagcaaa aaagagaggt 3550
tgtagcaag atgaagtcc acctctttgt aatcgaatca aaaaagtgat 3600
atctcatcac ttgggcata tctatttgt tagaagttaa ccacaggtcc 3650
ccacagctcc atgggagtga ccacctcagt ccagggaaaa cagctgaaga 3700
ccaagatggt gagctctgat tgcctcagtt ggtcatcaac tatttccct 3750
tgactgctgt cctgggatgg cctgctatct tgatgataga ttgtgaatat 3800
caggaggcag ggcactctgt ggacatctt agcagttgac ctaacacatc 3850
ttcttttcaa tatctaagaa cttttgcacc tgtgactaat ggtccataa 3900
ttaagctgtt gtttatatt atcatatata tatggctaca tggttatatt 3950
atgctgtggt tgggttcggt tttatttaca gttgcttca caaatatttg 4000
ctgtaacatt tgaattctaa ggcttagatg ccatttaaga actgagatgg 4050
atagctttta aagcatcttt tactttttac ctttttttaa aagtatgcag 4100

ctaaattoga agcttttgggt ctatattggt aattgccatt gctgtaaaac 4150

ctaaaatgaa tgaataaaaa tgtttcattt tacaaaaaaa aaaaaaaaaa 4152

<210> 493

<211> 1041

<212> PRT

<213> Homo sapiens

<240> 493

Met	Glu	Asn	Met	Phe	Leu	Gln	Ser	Ser	Met	Leu	Thr	Cys	Ile	Phe
1				5					10					15

Leu	Leu	Ile	Ser	Gly	Ser	Cys	Glu	Leu	Cys	Ala	Glu	Glu	Asn	Phe
				20					25					30

Ser	Arg	Ser	Tyr	Pro	Cys	Asp	Glu	Lys	Lys	Gln	Asn	Asp	Ser	Val
				35					40					45

Ile	Ala	Glu	Cys	Ser	Asn	Arg	Arg	Leu	Gln	Glu	Val	Pro	Gln	Thr
				50					55					60

Val	Gly	Lys	Tyr	Val	Thr	Glu	Leu	Asp	Leu	Ser	Asp	Asn	Phe	Ile
				65					70					75

Thr	His	Ile	Thr	Asn	Glu	Ser	Phe	Gln	Gly	Leu	Gln	Asn	Leu	Thr
				80					85					90

Lys	Ile	Asn	Leu	Asn	His	Asn	Pro	Asn	Val	Gln	His	Gln	Asn	Gly
				95					100					105

Asn	Pro	Gly	Ile	Gln	Ser	Asn	Gly	Leu	Asn	Ile	Thr	Asp	Gly	Ala
				110					115					120

Phe	Leu	Asn	Leu	Lys	Asn	Leu	Arg	Glu	Leu	Leu	Leu	Glu	Asp	Asn
				125					130					135

Gln	Leu	Pro	Gln	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Ser	Leu	Thr	Glu
				140					145					150

Leu	Ser	Leu	Ile	Gln	Asn	Asn	Ile	Tyr	Asn	Ile	Thr	Lys	Glu	Gly
				155					160					165

Ile	Ser	Arg	Leu	Ile	Asn	Leu	Lys	Asn	Leu	Tyr	Leu	Ala	Trp	Asn
				170					175					180

Cys	Tyr	Phe	Asn	Lys	Val	Cys	Glu	Lys	Thr	Asn	Ile	Glu	Asp	Gly
				185					190					195

Val	Phe	Glu	Thr	Leu	Thr	Asn	Leu	Glu	Leu	Leu	Ser	Leu	Ser	Phe
				200					205					210

Asn	Ser	Leu	Ser	His	Val	Pro	Pro	Lys	Leu	Pro	Ser	Ser	Leu	Arg
				215					220					225

Lys	Leu	Phe	Leu	Ser	Asn	Thr	Gln	Ile	Lys	Tyr	Ile	Ser	Glu	Glu
				230					235					240

Asp Phe Lys Gly	Leu Ile Asn Leu Thr	Leu Leu Asp Leu Ser Gly
245	250	255
Asn Cys Pro Arg Cys	Phe Asn Ala Pro Phe	Pro Cys Val Pro Cys
260	265	270
Asp Gly Gly Ala Ser	Ile Asn Ile Asp Arg	Phe Ala Phe Gln Asn
275	280	285
Leu Thr Gln Leu Arg	Tyr Leu Asn Leu Ser	Ser Thr Ser Leu Arg
290	295	300
Lys Ile Asn Ala Ala	Trp Phe Lys Asn Met	Pro His Leu Lys Val
305	310	315
Leu Asp Leu Glu Phe	Asn Tyr Leu Val Gly	Glu Ile Val Ser Gly
320	325	330
Ala Phe Leu Thr Met	Leu Pro Arg Leu Glu	Ile Leu Asp Leu Ser
335	340	345
Phe Asn Tyr Ile Lys	Gly Ser Tyr Pro Gln	His Ile Asn Ile Ser
350	355	360
Arg Asn Phe Ser Lys	Leu Leu Ser Leu Arg	Ala Leu His Leu Arg
365	370	375
Gly Tyr Val Phe Gln	Glu Leu Arg Glu Asp	Asp Phe Gln Pro Leu
380	385	390
Met Gln Leu Pro Asn	Leu Ser Thr Ile Asn	Leu Gly Ile Asn Phe
395	400	405
Ile Lys Gln Ile Asp	Phe Lys Leu Phe Gln	Asn Phe Ser Asn Leu
410	415	420
Glu Ile Ile Tyr Leu	Ser Glu Asn Arg Ile	Ser Pro Leu Val Lys
425	430	435
Asp Thr Arg Gln Ser	Tyr Ala Asn Ser Ser	Ser Phe Gln Arg His
440	445	450
Ile Arg Lys Arg Arg	Ser Thr Asp Phe Gln	Phe Asp Pro His Ser
455	460	465
Asn Phe Tyr His Phe	Thr Arg Pro Leu Ile	Lys Pro Gln Cys Ala
470	475	480
Ala Tyr Gly Lys Ala	Leu Asp Leu Ser Leu	Asn Ser Ile Phe Phe
485	490	495
Ile Gly Pro Asn Gln	Phe Glu Asn Leu Pro	Asp Ile Ala Cys Leu
500	505	510
Asn Leu Ser Ala Asn	Ser Asn Ala Gln Val	Leu Ser Gly Thr Glu
515	520	525

Phe Ser Ala Ile	Pro His Val Lys Tyr	Leu Asp Leu Thr Asn Asn	530	535	540
Arg Leu Asp Phe	Asp Asn Ala Ser Ala	Leu Thr Glu Leu Ser Asp	545	550	555
Leu Glu Val Leu	Asp Leu Ser Tyr Asn	Ser His Tyr Phe Arg Ile	560	565	570
Ala Gly Val Thr	His His Leu Glu Phe	Ile Gln Asn Phe Thr Asn	575	580	585
Leu Lys Val Leu	Asn Leu Ser His Asn	Asn Ile Tyr Thr Leu Thr	590	595	600
Asp Lys Tyr Asn	Leu Glu Ser Lys Ser	Leu Val Glu Leu Val Phe	605	610	615
Ser Gly Asn Arg	Leu Asp Ile Leu Trp	Asn Asp Asp Asp Asn Arg	620	625	630
Tyr Ile Ser Ile	Phe Lys Gly Leu Lys	Asn Leu Thr Arg Leu Asp	635	640	645
Leu Ser Leu Asn	Arg Leu Lys His Ile	Pro Asn Glu Ala Phe Leu	650	655	660
Asn Leu Pro Ala	Ser Leu Thr Glu Leu	His Ile Asn Asp Asn Met	665	670	675
Leu Lys Phe Phe	Asn Trp Thr Leu Leu	Gln Gln Phe Pro Arg Leu	680	685	690
Glu Leu Leu Asp	Leu Arg Gly Asn Lys	Leu Leu Phe Leu Thr Asp	695	700	705
Ser Leu Ser Asp	Phe Thr Ser Ser Leu	Arg Thr Leu Leu Leu Ser	710	715	720
His Asn Arg Ile	Ser His Leu Pro Ser	Gly Phe Leu Ser Glu Val	725	730	735
Ser Ser Leu Lys	His Leu Asp Leu Ser	Ser Asn Leu Leu Lys Thr	740	745	750
Ile Asn Lys Ser	Ala Leu Glu Thr Lys	Thr Thr Thr Lys Leu Ser	755	760	765
Met Leu Glu Leu	His Gly Asn Pro Phe	Glu Cys Thr Cys Asp Ile	770	775	780
Gly Asp Phe Arg	Arg Trp Met Asp Glu	His Leu Asn Val Lys Ile	785	790	795
Pro Arg Leu Val	Asp Val Ile Cys Ala	Ser Pro Gly Asp Gln Arg	800	805	810

Gly Lys Ser Ile Val Ser Leu Glu Leu Thr Thr Cys Val Ser Asp
815 820 825

Val Thr Ala Val Ile Leu Phe Phe Phe Thr Phe Phe Ile Thr Thr
830 835 840

Met Val Met Leu Ala Ala Leu Ala His His Leu Phe Tyr Trp Asp
845 850 855

Val Trp Phe Ile Tyr Asn Val Cys Leu Ala Lys Val Lys Gly Tyr
860 865 870

Arg Ser Leu Ser Thr Ser Gln Thr Phe Tyr Asp Ala Tyr Ile Ser
875 880 885

Tyr Asp Thr Lys Asp Ala Ser Val Thr Asp Trp Val Ile Asn Glu
890 895 900

Leu Arg Tyr His Leu Glu Glu Ser Arg Asp Lys Asn Val Leu Leu
905 910 915

Cys Leu Glu Glu Arg Asp Trp Asp Pro Gly Leu Ala Ile Ile Asp
920 925 930

Asn Leu Met Gln Ser Ile Asn Gln Ser Lys Lys Thr Val Phe Val
935 940 945

Leu Thr Lys Lys Tyr Ala Lys Ser Trp Asn Phe Lys Thr Ala Phe
950 955 960

Tyr Leu Ala Leu Gln Arg Leu Met Asp Glu Asn Met Asp Val Ile
965 970 975

Ile Phe Ile Leu Leu Glu Pro Val Leu Gln His Ser Gln Tyr Leu
980 985 990

Arg Leu Arg Gln Arg Ile Cys Lys Ser Ser Ile Leu Gln Trp Pro
995 1000 1005

Asp Asn Pro Lys Ala Glu Gly Leu Phe Trp Gln Thr Leu Arg Asn
1010 1015 1020

Val Val Leu Thr Gln Asn Asp Ser Arg Tyr Asn Asn Met Tyr Val
1025 1030 1035

Asp Ser Ile Lys Gln Tyr
1040

42110 499

42111 20

42112 DNA

42113 Artificial Sequence

42230

42230 Synthetic oligonucleotide probe

<480> 489
ttaaagatccca gctgtgaccg 20

<490> 500
<510> 20
<511> DNA
<513> Artificial Sequence

<520>
<521> Synthetic oligonucleotide probe

<490> 500
atccatcagc ctctgatggg 20

<510> 511
<511> 45
<512> DNA
<513> Artificial Sequence

<520>
<521> Synthetic oligonucleotide probe

<490> 501
atttatgtct ccgaggaaagg gactggttac cagggcagcc agttc 45

<510> 512
<511> 31
<512> DNA
<513> Artificial Sequence

<520>
<521> Synthetic oligonucleotide probe

<490> 502
gcagatacaa aaacgttctc c 21

<510> 503
<511> 24
<512> DNA
<513> Artificial Sequence

<520>
<521> Synthetic oligonucleotide probe

<490> 503
catccatggtt ctcatccatt agcc 24

<510> 514
<511> 46
<512> DNA
<513> Artificial Sequence

<520>
<521> Synthetic oligonucleotide probe

<490> 504
tcgacaacct catgcagagc atcaaccaaa gcaagaaaac agtatt 46

(210) 505
(211) 1738
(212) DNA
(213) Homo sapiens

(400) 505
ccaggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50
ctagagatcc ctgcacctcg acccaagggt ccgccaagct ggccctgcac 100
ggctgcacagg gaggctcctg tggacaggcc aggcagggtgg ggcacaggag 150
gtgctccacg gcggccagtg ggcccgagga ccagccaagg gctagggctc 200
atccccagtc ccaggacaca gcagcgggca ccctggccac gctggggctc 250
cagcagcatc agcagccccc aggaacgggg aggcacaggt ggccccaccc 300
aacgggagga gcagctcctg cccctgtccg ggggatgaat gattctcctc 350
cgcaggcca ccagaggag aaggccaccc ccctggagg cacaggccat 400
gaggggtctt caggaggctg tctctgatgt gctctctggg cgggcagtgg 450
gggtcacaga gcaagctac cggcccgggc gtagggtgtg tctgtccgg 500
gctcacgggg accctgtctc cagctcgttc gtgcaggctg tgtaccagcc 550
cttctccacc accctgcagc ggcaccgggc ctgcagcacc taccgaacca 600
ctctataggc cggctaacgc ccagccctg ggtggcccc tggcaggcct 650
cgctacgggt gctgccccgg ccggaagagg accagcgggc ttcctggggc 700
ctgtggagca gcaatctgc agccgccatg ccggaacgga gggagctgtg 750
ccagccctgg ccgtctccgc tggccctgag gatggcgggg tgacacctgc 800
cagtcagatg tggatgaatg cagtgttagg aggggcgggt gccccagcg 850
ctgcacacc accgcggga gtaactggtg ccagtgttg gaggggcaca 900
gctgtctgc agacggtaaa ctctgtgtgc ccaagggagg gccccccagg 950
gtggccccc acccgacagg agtggacagt gcaatgaagg aagaagtgc 1000
gaggctgcag tccaggggtg accgtctgga ggagaagctg cagctggtgc 1050
tggcccaact gacagcctg gctcgcagg cactggagca tgggtcccg 1100
gaccccgga gctcctggt gcactccttc cagcagctcg gcgcacaga 1150
ctccctgagc gacagattt cctccctgga ggagcagctg ggtcctgct 1200
cctgcaagaa agactcgtga ctgcccagcg cccaggctg gactgagccc 1250

ctcagggcgc cctgcagccc ccctgcccct gcccaacatg ctggggggtcc 1360
agaagccacc tcgggggtgac tgaggggaag gccagggcagg gcttctctcc 1370
tcttctctct ccccttctct gggagggtcc ccagacccctg gcctggggatg 1400
ggctgggata ttctctgtga atccacccct ggctaccccc accctggcta 1450
ccccaaaggc atcccaagga caggtggggc ctgagctgag ggaaggtaag 1500
agctccctgc tggagccctgg gaccatggc acagggccagg cagcccgagg 1550
gtgggggggg gctcagctgg gggctgtctg ctgaccccca gcacataaa 1600
aatgaaactg gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1610
aaaggggggc cggagactcta gactcgacct gcagaagctt ggcggccatg 1700
gcccaacttg ttattgcag ctataatgg ctacaaat 1753

<110> 506
<111> 273
<112> PRT
<113> Homo sapiens

<110> 506
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu
1 5 10 15
Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
20 25 30
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val
35 40 45
Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
50 55 60
Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg
65 70 75
Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro
80 85 90
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala
95 100 105
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
110 115 120
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
125 130 135
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Glu
140 145 150
Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu

155	160	165
Gly His Ser Leu Ser Ala Asp Gly Thr	Leu Cys Val Pro Lys Gly	
170	175	180
Gly Pro Pro Arg Val Ala Pro Asn Pro	Thr Gly Val Asp Ser Ala	
185	190	195
Met Lys Glu Glu Val Gln Arg Leu Gln	Ser Arg Val Asp Leu Leu	
200	205	210
Glu Glu Lys Leu Gln Leu Val Leu Ala	Pro Leu His Ser Leu Ala	
215	220	225
Ser Gln Ala Leu Glu His Gly Leu Pro	Asp Pro Gly Ser Leu Leu	
230	235	240
Val His Ser Phe Gln Gln Leu Gly Arg	Ile Asp Ser Leu Ser Glu	
245	250	255
Gln Ile Ser Phe Leu Glu Glu Gln Leu	Gly Ser Cys Ser Cys Lys	
260	265	270
Lys Asp Ser		

<210> 507
 <211> 1700
 <212> DNA
 <213> Homo sapiens

<400> 507
 ggcaggcagg tgggctcag gaggtgcctc caggcggcca gggggcctga 50
 ggcccagca agggctaggg tccatctcca gtccaggac acagcagcgg 100
 ccaccatggc cagcctggg ctccagcagc atcagagcag cccctgggtt 150
 tggcagcaaa gtccagcttg gctgggcccg ctgtgagggg cttcgcgcta 200
 ggcctggcg tgtccaggg gctgaggtct cctcatcttc tccctagcag 250
 tggatgagca acccaacggg ggcccgggga ggggaactgg ccccgaggga 300
 gaggaacccc aaagccacat ctgtagccag gatgagcagt gtgaatccag 350
 gcagccccc ggacggggga ggcacaggtg gcccccacca cccggaggag 400
 cagctcctgc cctgtccgg gggatgaact attctctctc gccaggccac 450
 ccagaggaga agggacccc gctggaggc acaggcctg aggggctctc 500
 aggaggtgct gctgatgttg cttctgggtg tggcagtggg cggcacagag 550
 cagcctacc ggcccggcg tagggtgtgt gctgtccggg ctccgggga 600
 cctgtctctc gactgttctg tgcaggtgt gtaccagccc ttctcacca 650

cctgcgacgg gcacggggcc tgcagcaact accgaaccat ctataggacc 700
 gcc'acggcc gcagccctgg gatggccact gccaggccctc gctacggctg 750
 ctgccccggc tgggaagagg ccagcggggt cctcggggcc tctggaggag 800
 caatatgcca gcggccatgc cgggaacggag ggagctgtgt ccagcctggc 850
 cgtgcgcgtc gccctgcagg atggcggggc gacacttgcc agtcagatgt 900
 ggangaatgc agtctatagg gggcgggctg tccccagcgc tgcataaca 950
 ccgtcggcag ctactgggtg cagtgttggg aggggcacag cctgtctgca 1000
 gacggtaaac cctgtgtgac caagggaggg cccccaggg tggcccccaa 1050
 ccgacaggga gtggacagt ccaatgaagg agaaptgcag aggcctgcagt 1100
 ccaggttgga cctgttgag gagaagctgc agctggctgt ggccccactg 1150
 cacagcctgg cctcgcaggc actggagcat gggctccgg accccggcag 1200
 cctcctgtgt caactccttc agcagctcgg ccgcctcgac cccctgagcg 1250
 agcagatttc cttccctggag gaggagctgg ggtcctgtct ctgcaagaaa 1300
 gactcgtgac tggccagcgc tccaggtcgg actgagcccc tcaagccgcc 1350
 ctgcagcccc catgcacctg cccaacatgc tgggggtcca gaagccact 1400
 cgggtgact gagaggagg ccaggcaggg ccttcctct cttcctctct 1450
 ccttcctctg ggaggtccc cagacccctg catgggatgg gctgggctct 1500
 tctctgtgaa tccacccctg gctaccccc cctggtctac cccaacggca 1550
 tccccaggcc aggtggaccc tcaagtgagg gaaggtacga gctccctgct 1600
 ggacccctgg acccatggca caggccaggg agcccgagg ctgggtgggg 1650
 cctcagtggg ggtcgtgccc tgacccccag cacaataaaa atgaaacgtg 1700

<210> 508
 <211> 273
 <212> PRT
 <213> Homo sapiens

<400> 508
 Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu
 1 5 10 15
 Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
 20 25 30
 Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val
 35 40 45

Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	
				50					55					60	
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	
				65					70					75	
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	
				80					85					90	
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	
				95					100					105	
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	
				110					115					120	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	
				125					130					135	
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	
				140					145					150	
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	
				155					160					165	
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	
				170					175					180	
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	
				185					190					195	
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	
				200					205					210	
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	
				215					220					225	
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	
				230					235					240	
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	
				245					250					255	
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	
				260					265					270	

Lys Asp Ser

<110> 509
 <110> 1533
 <110> DNA
 <110> Homo sapiens

<110> 509
 ...ccacagcgtc cgaagctggc cctgcacggc tgcaaggag gctcctgtgg 50

acaggccagg caggtgggcn tcaggaggtg cctccaggcg gccagtgggc 100
 ctgaggccccc agcaagggct agggcccatc tccagtccca ggacacagca 150
 ggggccaaca tggccacgca tgggtccag cagcatcagc agcccccagg 200
 accggggagg cacagggtggc ccccaaccac cggaggagca gctcctggcc 250
 ctgtccgggg gatgaatgat tctcctccgc caggccaccc agaggagaag 300
 gccaccccgcc ctggaggcac aggcacagag gggctctcag gaggctctgc 350
 tcatgtgggt tctgggtgtg gcagtggggc gcacagagca cggctacggg 400
 cccggccgta ggggtgtgtg tgtccgggtc cagggggacc ctgtctccga 450
 gtctctctg cagcgtgtgt accagccctt cctcaccacc tgggacgggc 500
 accgggctcg cagcacctac cgaaccatct ataggaccgc ctaccgcccc 550
 agccctgggc tggccctcg caggccctgc taaggctgct gccccggctg 600
 gaaggaggac agggggcttc ctggggccctg tggaggagca atatgcccgc 650
 cggcatgcgc gaacggaggg agctgtgtcc agccctggccg ctgcccctgc 700
 cctgcaggat ggggggggca cacttgcag ccagatgtgg atgaatgcag 750
 tctaggagg ggggtctgtc cccagcctg cgtcaacacc gccggcagtt 800
 actggcgcca gtgttgggag gggcacagcc tgtctgcaga cggtaacctc 850
 tgtgtgcaca agggagggcn cccagggcg gcccccaacc cgcacaggag 900
 ggacagtcca atgaaggag aagtgcagag gctgcagtc agggcgagcc 950
 tcttgaggga gaagctgcag ctggctgctg ccccactgca cagccctggc 1000
 tccagggcac tggagcatgg gctcccgga cccggcagcc tccctggtgca 1050
 ctcctccag cagctcgccc gcctcgactc cctgagcgag cagatttcct 1100
 tccggaggga gcagctgggg tccctgctct gcaagaaaag ctctgcactg 1150
 cccagcgccc caggctggac tgagcccttc accccgccc gcagccccc 1200
 tggccctgcc caacatgctg ggggtccaga agccacctcg ggtgactga 1250
 ggggaaggcc aggcagggcn tctctctct tctctctcc ctctctcggy 1300
 aggtccccc gacctggca tgggatgggc tgggatcttc tctgtgaatc 1350
 caccctgggc tacccccacc ctggctaccc caacggcatc ccaaggccag 1400
 gtggggccctc agctgaggga aggtacagac tccctgctgg agcctgggac 1450
 ccctggcaca ggcacggcag cccggaggct ggggtggggc tcagtggggg 1500

ctgctgctg acccccagca caataaaaaat gaaaogtg 1538

00100 510
00110 073
00120 PRT
00130 Homo sapiens

00000 510
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu
1 5 10 15
Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
20 25 30
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val
35 40 45
Ile Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
50 55 60
Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg
65 70 75
Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro
80 85 90
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala
95 100 105
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
110 115 120
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
125 130 135
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln
140 145 150
Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu
155 160 165
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly
170 175 180
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala
185 190 195
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu
200 205 210
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala
215 220 225
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu
230 235 240

Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu
245 250 255

Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys
260 265 270

Lys Asp Ser

<210> 511
<211> 21
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 511
Tggagagaga atatgacaga c 21

<210> 512
<211> 27
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 512
ttttccactc ctgtggggtt gg 22

<210> 513
<211> 46
<212> DNA
<213> Artificial Sequence

<210>
<213> Synthetic oligonucleotide probe

<400> 513
tggtgacatt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 514
<211> 1690
<212> DNA
<213> Homo sapiens

<210>
<211> unsure
<212> 1039-2065
<223> unknown base

<400> 514
ggttgccaca gctgggttag ggccccgacc actggggccc cttgtcagga 50
ggagacagcc tccgggcccgg gggaggacaa gtcgtgcc cctttggctg 100

cagacgtgat tccctgggac ggtccgtttc ctgcctgcag ctgcctggccg 150
 agttgggtct ccgtgtttca ggcctggctcc ccttccctgg tctcccttct 200
 ccctgtgggc cgttttatcg ggagggagatt gtctccacag gctagcaatt 250
 ggaattttga tgatgtttga cccagcggca ggaatagcag gcaacgtgat 300
 ttcacagctg ggctcagcct ctgtttcttc tctcgtgtaa tcgcaaaaac 350
 cacttgggag caggaattcc aatcatgtct gtgatggtag tgagaaaaga 400
 ggtgacacgg aaatgggaga aactcccagg caggaacacc ttttgcgtgt 450
 atggcccgct catgatggcc cggcaaaaag gcattttcta cctgacccct 500
 ttcctcacc cggggacatg tacactcttc ttgccttttg agtgcctgta 550
 cctggctgtt cagctgtctc ctgcacacc tctatttgcg gccatgctct 600
 tctttttctc catgggtaca ctgttgagga ccagcttcag tgacccctga 650
 gtgattcttc gggcgtacc agatgaagca gcttccatag aaatggagat 700
 agaagctacc aatggtaggg tgcctccagg ccagcgacca ccgcctcgtt 750
 tcaagaattt ccagataaac aaccagattg tgaaaactga atactgttac 800
 acatgcaga tcttccggcc tcccggggcc tccattgca gcattcgtga 850
 caactgtgtg gagcgttcg accatcactg cccctgggtg gggcaattgt 900
 ttggaaaag gagactacc tacttctacc tcttcactct tctctctccc 950
 ctctcacaa tctatgtctt cgtctcaca atcgtctatg ttgcctcaca 1000
 atctttgaaa attggctctt tggagacatt gaaagaaaat cctggaaact 1050
 ttctagaagt cctcatttgc tctttcacac tctggctcgt cgtgggaact 1100
 actggatttc atactttct cgtggctctc aaccagacaa ccaatgaaga 1150
 catcaaaagg ccatggacag ggaagaatcg cgtccagaat cctacagcc 1200
 atggcaatat tctgaagaac tctgtgaag tctgtgtgg cccctggccc 1250
 ccagtgctgc tggatcgaag ggttatcttg ccactggagg aaagtggaag 1300
 tcgacctccc agtactcaag agacccagtag cagctctctg ccacagagcc 1350
 cagccccacc agaaccctg aactcaaatg agatgcggga ggacagcaga 1400
 actcccgaa agatgcacac tccagagccc ccagagccc caccaggagg 1450
 agctgaagct gagaagttag ctatctatgg aagagacttt tgttctgttc 1500
 taattagggc tatgagagat ttcaggtgag aagttaaac tgagacagag 1550

agcaagtaag ctgtcccttt taactgtttt tcttttgtct ttagtcaccc 1600
 agttgcacac tggcattttt ttgctgcaag cttttttaaa tttctgaact 1650
 caaggcagtg gcagaagatg ttagtcacct ctgataactg gaaaaatggg 1700
 tctcttgggc ccctggcactg gttctccatg gcttcagcca caggggtccc 1750
 ttggaccccc tctcttccct ccagatccca ggcctcctgc ttgggggtcac 1800
 tggctcatt ctgggggtaa aagtttttga gactgggtca aatcctccca 1850
 agctgttgca cgtgtgtagt ccagaggcag tcacagagac ctctggccag 1900
 gggatcccaa ctgggttctt ggggtcttca ggactgaaga ggaggagag 1950
 tggggtcaga agattctctt ggcacccaag tgcacgatt gccacaaaat 2000
 ccttttagga atgggacagg taccttccac ttgttgtann nnnnnnnnnn 2050
 nnnnnnnnn nnnnttgtt tttcctttt actcctgctc ccattaggag 2100
 caggaaatgg agtaataaaa gtctgcactt tggtcatttc ttttctcag 2150
 aggaagcccg agtgcctact taaacactat cccctcagac cccctgtgtg 2200
 aggtctgcag aggccttgaa tgcacaaatg ggaaaccaag gcacagagag 2250
 gctctcctct cctctcctct cccctgatgt accctcaaaa aaaaaaaaaa 2300
 gctaacccag tcttccatta agcctcgggt gagtgcaggga aagccacgca 2350
 ctgttgccct ctggggtaac tcaccccaag gctcggccc accctcgggt 2400
 atgttaacca cactgggggc ttcctccaag cccctgtctt ccagcatttc 2450
 caccggcaga gtcccagagc cacttcaccc tgggggtggg ctgtggcccc 2500
 cagtcagctc tgcacaggac ctgctctatt tcagggaaga agatttatgt 2550
 atttatgtg gctatatttc ctagagcac tgtgttttcc tttttctaag 2600
 ccagggtcct gtctggatga cttatgggtt gggggagtgt aaaccggaac 2650
 ttttcattta ttgaaggcg attaaactgt gtctaattga 2690

<210> 315
 <211> 364
 <212> PRT
 <213> Homo sapiens

<400> 315
 Met Ser Val Met Val Val Arg Lys Lys Val Thr Arg Lys Trp Glu
 1 5 10 15
 Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met

20					25					30				
Met	Ala	Arg	Gln	Lys	Gly	Ile	Phe	Tyr	Leu	Thr	Leu	Phe	Leu	Ile
				35					40					45
Leu	Gly	Thr	Cys	Thr	Leu	Phe	Phe	Ala	Phe	Glu	Cys	Arg	Tyr	Leu
				50					55					60
Ala	Val	Gln	Leu	Ser	Pro	Ala	Ile	Pro	Val	Phe	Ala	Ala	Met	Leu
				65					70					75
Phe	Leu	Phe	Ser	Met	Ala	Thr	Leu	Leu	Arg	Thr	Ser	Phe	Ser	Asp
				80					85					90
Pro	Gly	Val	Ile	Pro	Arg	Ala	Leu	Pro	Asp	Glu	Ala	Ala	Phe	Ile
				95					100					105
Glu	Met	Glu	Ile	Glu	Ala	Thr	Asn	Gly	Ala	Val	Pro	Gln	Gly	Gln
				110					115					120
Arg	Pro	Pro	Pro	Arg	Ile	Lys	Asn	Phe	Gln	Ile	Asn	Asn	Gln	Ile
				125					130					135
Val	Lys	Leu	Lys	Tyr	Cys	Tyr	Thr	Cys	Lys	Ile	Phe	Arg	Pro	Pro
				140					145					150
Arg	Ala	Ser	His	Cys	Ser	Ile	Cys	Asp	Asn	Cys	Val	Glu	Arg	Phe
				155					160					165
Asp	His	His	Cys	Pro	Trp	Val	Gly	Asn	Cys	Val	Gly	Lys	Arg	Asn
				170					175					180
Tyr	Arg	Tyr	Phe	Tyr	Leu	Phe	Ile	Leu	Ser	Leu	Ser	Leu	Leu	Thr
				185					190					195
Ile	Tyr	Val	Phe	Ala	Phe	Asn	Ile	Val	Tyr	Val	Ala	Leu	Lys	Ser
				200					205					210
Leu	Lys	Ile	Gly	Phe	Leu	Glu	Thr	Leu	Lys	Glu	Thr	Pro	Gly	Thr
				215					220					225
Val	Leu	Glu	Val	Leu	Ile	Cys	Phe	Phe	Thr	Leu	Trp	Ser	Val	Val
				230					235					240
Gly	Leu	Thr	Gly	Phe	His	Thr	Phe	Leu	Val	Ala	Leu	Asn	Gln	Thr
				245					250					255
Thr	Asn	Glu	Asp	Ile	Lys	Gly	Ser	Trp	Thr	Gly	Lys	Asn	Arg	Val
				260					265					270
Gln	Asn	Pro	Tyr	Ser	His	Gly	Asn	Ile	Val	Lys	Asn	Cys	Cys	Glu
				275					280					285
Val	Leu	Cys	Gly	Pro	Leu	Pro	Pro	Ser	Val	Leu	Asp	Arg	Arg	Gly
				290					295					300
Ile	Leu	Pro	Leu	Glu	Glu	Ser	Gly	Ser	Arg	Pro	Pro	Ser	Thr	Gln

	305		310		315
Glu Thr Ser Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu					
	320		325		330
His Leu Asn Ser Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu					
	335		340		345
Glu Met Pro Pro Pro Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala					
	350		355		360

Glu Ala Glu Lys

<210> 516
 <211> 255
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 86, 88, 89, 118, 135, 193, 213, 222
 <223> unknown base

<400> 516
 Aaaacccctgt attttttaca atgcaaatac acaatnanco tggaggtctt 50
 tgaattaggt attatagggg tgggtggggtt gatttttntt cctggagggt 100
 ttgggttttg gaactctnct ttctccacaa gagcncttgc accatcactg 150
 tccctgggtg gggaattgtg ttggaaagag gaactaccgc tantttctac 200
 tcttcactct ttntctctcc cncctcacaac tctatgtctt cgccttcaac 250
 atcgt 255

<210> 517
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Synthetic oligonucleotide probe

<400> 517
 caacgtgatt tcaaagctgg gctc 24

<210> 518
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Synthetic oligonucleotide probe

<400> 518

gactcgtatc aagaatttc 20

<210> 519

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

agtcgaagtc gactccc 18

<210> 520

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ctccactgaa atctctcata gcc 24

<210> 521

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

tcgcaaaaacc attttgggag caggaattcc aatcatgtct gtgatggctg 50

<210> 522

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 522

cttgtgtcct tcagcaaaac agtggattta aatctccttg cacaagcttg 50

agagcaaac aatctatcag gaagaaaaga aagaaaaaaa ccgaacctga 100

caaaaaagaa gaaaaagaag aagaaaaaaa atcatgaaa ccattccagc 150

aaaaatgac aattctatct ctggggcaat cttaacgggg ctggctgctc 200

tgtgtctctt ccaaggagtg ccgtgagca gaggagatgc caacttccc 250

aaagctatgg acaactgac ggtccggcag ggggagagcg ccacctcag 300

gttcactatt gacaacgggg ccacctgggt ggctggcta aacgcagca 350

ccatctctta tgctgggaat gacaagtgg gctggatcc tcgctggtc 400

ttctctgagca acaccccaaac gcagtagagc atcgagatcc agaacgtgga 450
 tctgttatgac gaggggcctt acacctgctc ggtgcagaca gacaaccacc 500
 caaagacctc taggggtccac ctcatgtgcg aagtatctcc caaaattgta 550
 gagatttctt cagatatctc cattaatgaa gggaacaata ttagcctcac 600
 ctgcatagca actggtagac cagagcctac ggttacttgg agacacatct 650
 cccccaagc ggttggcttc gtgagtgaag acgaatactt ggaaattcag 700
 ggcacacccc gggagcagtc aggggaactac gagtgcagtg cctccaatga 750
 cgtggccgcg ccctgtggtac ggagagtaaa ggtcacctgt aactatccac 800
 catacatttc agaagccaag ggtacaggtg tcccctgtgg acaaaagggg 850
 acactgcagt gtgaagcctc agcagtcccc tcagcagaat tcagtggtta 900
 caaggatgac aaaagactga ttgaaggaaa gaaaggggtg aaagtggaaa 950
 acagaccttt cctctcaaaa ctcatcttct tcaatgtctc tgaacatgac 1000
 tatgggaact acacttggtt ggctccaac aagctgggcc acaccaatgc 1050
 cagcaccatg ctatttgytc caggcgccgt cagcgaggtg agcaacggca 1100
 cgtcagggag ggcaggctgc gtctgggtgc tgcctctctt ggtcttgcac 1150
 ctgctctctc aattttgatg tgagtgcac tccccaccc gggaaaaggct 1200
 gccgcaccca ccaccaccaa cacaacagca atggcaacac cgacagcaac 1250
 caatcagata tatacaaatg aaattagaag aaacacagcc tcattggaca 1300
 gaaatttgag ggagggggaac aaagaatact ttgggggggaa aagagtttta 1350
 aaaaaaaaat tgaaaattgc cttgcagata tttaggtaca atggagtttt 1400
 cttttcccaa acgggaagaa cacagcacac ccggcttgya ccactgcac 1450
 gctgcacgtt gcaacctctt ttggtgcagt gtgggcaagg gctcagcttc 1500
 tctgcacaca gagtgcaccc acgttggaaca ttctggagct ggccatccca 1550
 aattcaatca gtccatagag acgaacagaa tgagaccttc cggcccaagc 1600
 gtgtcgctgc gggcactttg gtagactgtg ccaccaaggc gtgtgttgtg 1650
 aaagtgtgaa taaaaagagc aaaaaaaaa 1679

(210) • 523
 (211) • 344
 (212) • PRT
 (213) • Homo sapiens

<400> 523

Met	Lys	Thr	Ile	Gln	Pro	Lys	Met	His	Asn	Ser	Ile	Ser	Trp	Ala
1				5					10					15
Ile	Phe	Thr	Gly	Leu	Ala	Ala	Leu	Cys	Leu	Phe	Gln	Gly	Val	Pro
				20					25					30
Val	Arg	Ser	Gly	Asp	Ala	Thr	Phe	Pro	Lys	Ala	Met	Asp	Asn	Val
				35					40					45
Thr	Val	Arg	Gln	Gly	Glu	Ser	Ala	Thr	Leu	Arg	Cys	Thr	Ile	Asp
				50					55					60
Asn	Arg	Val	Thr	Arg	Val	Ala	Trp	Leu	Asn	Arg	Ser	Thr	Ile	Leu
				65					70					75
Tyr	Ala	Gly	Asn	Asp	Lys	Trp	Cys	Leu	Asp	Pro	Arg	Val	Val	Leu
				80					85					90
Leu	Ser	Asn	Thr	Gln	Thr	Gln	Tyr	Ser	Ile	Glu	Ile	Gln	Asn	Val
				95					100					105
Asp	Val	Tyr	Asp	Gln	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr	Asp
				110					115					120
Asn	His	Pro	Lys	Thr	Ser	Arg	Val	His	Leu	Ile	Val	Gln	Val	Ser
				125					130					135
Pro	Lys	Ile	Val	Gln	Ile	Ser	Ser	Asp	Ile	Ser	Ile	Asn	Glu	Gly
				140					145					150
Asn	Asn	Ile	Ser	Leu	Thr	Cys	Ile	Ala	Thr	Gly	Arg	Pro	Glu	Pro
				155					160					165
Thr	Val	Thr	Trp	Arg	His	Ile	Ser	Pro	Lys	Ala	Val	Gly	Phe	Val
				170					175					180
Ser	Glu	Asp	Gln	Tyr	Leu	Glu	Ile	Gln	Gly	Ile	Thr	Arg	Glu	Gln
				185					190					195
Ser	Gly	Asp	Tyr	Gln	Cys	Ser	Ala	Ser	Asn	Asp	Val	Ala	Ala	Pro
				200					205					210
Val	Val	Arg	Arg	Val	Lys	Val	Thr	Val	Asn	Tyr	Pro	Pro	Tyr	Ile
				215					220					225
Ser	Glu	Ala	Lys	Gly	Thr	Gly	Val	Pro	Val	Gly	Gln	Lys	Gly	Thr
				230					235					240
Leu	Gln	Cys	Glu	Ala	Ser	Ala	Val	Pro	Ser	Ala	Glu	Phe	Gln	Trp
				245					250					255
Tyr	Lys	Asp	Asp	Lys	Arg	Leu	Ile	Glu	Gly	Lys	Lys	Gly	Val	Lys
				260					265					270
Val	Glu	Asn	Arg	Pro	Phe	Leu	Ser	Lys	Leu	Ile	Phe	Phe	Asn	Val
				275					280					285

Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys
290 295 300

Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala
305 310 315

Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val
320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe
335 340

4010 - 514

4011 - 503

4012 - DNA

4013 - Homo sapiens

4000 - 514

taaaaaaat catgaaaaac atccagccaa aaatgcacaa ttctatctct 50
tggccaatct tcaagggggt ggtgtctctg tgtctctctc aaggagtggc 100
cgtggcagc ggagatggca ccttccccc aaatatggac aacgtgaagg 150
cccgccaggg ggagagcgcc acctccaggt gcactattga caaccgggtc 200
accgggtgg cctgggtaaa ccgcagccac atctctatg ctgggaatga 250
caagtgtggt ctggatctct ggtgtgtctt tctgagcaac acccaaacgc 300
agtacagcat cgagatccag aaagtggatg tgtatgacga gggcccttac 350
acctgctcgg tgcagacaga caaccaccca aagacctcta gggtcacact 400
catgtgtcaa gtatctccca aaattgtaga gattctctca gatctctcca 450
ttaatgaagg gaacaatatt agctccact gcatagcaac tggtagacca 500
gag 503

4010 - 503

4011 - 2602

4012 - DNA

4013 - Homo sapiens

4000 - 503

atggtctgtg acggcggggg cgggcagggg accggggcgg cggcccgggg 50
gggggcagc tgcggggagc cctgaatcac cggctggccc gactccacca 100
tgaacgtggt gctccaggag ctgggagctg gcagcaacgt gggattccag 150
aaggggacaa gacagctgtt aggtccagc acccagctgg agctggtctt 200
agcaggtgac tctctactga tggctgcact gcttctgggc tgccttgtgg 250

cccataggggt ccagtaccac agagaccat cccacagcac ctgctttaca 300
 gaggcctgca ttcgagtggc tggaaaaatc ctggagtccc tggacggagg 350
 ggtgagcccc tgtgaggact ttaccagtt ctcctgtggg ggctggatto 400
 ggaggaaacc cctgcccgat gggcgttctc gctggaaac cttcaacagc 450
 ctctgggacc aaaaccagga cactctgaag caactgcttg aaaacaccac 500
 cttcaactcc agcagtgaag ctgagcagaa gacacagcgc tttaccctat 550
 cttgcctaca ggtggagcgc attgaggagc tgggagcccc gccactgaga 600
 gaactcattg agaagattgg tggttgggaa attacggggc cctgggacca 650
 ggacaacttc atggaggtgt tgaaggcagt agcagggacc tacagggcca 700
 cccattcttc caccgtctac atcagtgcgc actctaagag ttccaacagc 750
 aatgttatcc aggtggacca gtctgggcct tttctgcct ctctggatta 800
 ctacttaaac agaactgcca atgagaaagt gctcactgcc tatctggatt 850
 acatggagga actggggatg ctgctgggtg ggctggcccc cttcacggag 900
 ggcagatgc agcaggtgct ggagttggag atacagctgg ccaacatcac 950
 agtgcctcag gaccagcggc ggcacgagga gaagatctac cacaagatga 1000
 gcatttcgga gctgcaggct ctggcgccct ccattggactg gcttgagttc 1050
 ctgtctttct tctgtccac attggagttg agtgaactct agcctgtggt 1100
 ggtgtatggg atggattatt ggcagcaggt gtcagagctc atcaaccgca 1150
 cggaaaccaag catcctgaac aattacctga tctggaaact ggtgcaaaag 1200
 acaacctcaa gcctggacgc acgctttgag tctgcacaag agaagctgct 1250
 ggagaccctc tatggcacta agaagtctg tctgcggagg tggcagacct 1300
 gcactctcaa ccaggatgac gcccttggct ttgctttggg gtcactcttc 1350
 gtgaaggcca cgtttgacgc gcaaaagcaaa gaaattgcag aggggatgat 1400
 cagcgaaatc cggacgcgat ttgaggaggc cctgggacag ctggtttggg 1450
 tggatgagaa gaccgcgcag gcagccaaag agaaagcaga tgccatctat 1500
 gatctgattg gtttccaga ctttatctg gagcccaag agctggatga 1550
 tgtttatgac gggtaacaaa tttctgaaga ttctttcttc caaaaactgt 1600
 tgaatttgta caactctctt gccaaaggta tggctgacca gctccgcaag 1650
 cctcccagcc gagaccagtg gagcatgacc ccccagacag tgaatgcta 1700

ctacettcca actaagaatg agatagtctt ccccgctggc atcctgcagg 1750
 cccctttcta tggccgcaac caccccaagg ccttgaactt cgggtggcacc 1800
 ggtgtggtca tgggccaatga gttgacgcat gcttttgatg accaaggggc 1850
 cgagtatgac aaagaagggg acctggggcc ctgggtggcag aatgagtccc 1900
 tggcagcctt ccgggaaccac accggcctgca tggagggaaca gtacaatcaa 1950
 taccaggtca atggggagag gctcaacggc cggcagacgc tgggggagaa 2000
 cattactgac aaaggggggc tgaaggctgc ctacaatgct taaaaagcat 2050
 ggctgagaaa gcatggggag gacgagcaac tggcagccgt ggggctcacc 2100
 aaccaccagc tcttcttctt gggatttgcg caggtctggt gctcggctcc 2150
 cacaccagag agctctcacc aggggctggt gacgacccc caccgccttg 2200
 ccgcttcccg cgtgctgggc actctctcca actccctgga ctccctggcg 2250
 cactccgctt ggcctgtctg ctcccccctg aaccaccggc agctgtgtga 2300
 ggtgtggtag acctggatca ggggagaaat ggcagctgt caccagacct 2350
 ggggcagctc tcttgacaaa gctgtttgct ctggggttgg gaggaagcaa 2400
 atgcaagctg ggttgggtct agtccctccc ccccaaggt gacatgagta 2450
 cagaccctcc tcaatcacca cattgtgctt ctgctttggg ggtgcacctg 2500
 cctccagcag agccccacc attcaacttg acatcttcc gtgtcaccct 2550
 ccttggaaga ggtctgggtg gggaggccag tcccatagg aaggagtctg 2600
 cc 2600

<210> 516
 <211> 716
 <212> PRT
 <213> Homo sapiens

<400> 516
 Met Asn Val Ala Leu Gln Glu Leu Gly Ala Gly Ser Asn Val Gly
 1 5 10 15
 Phe Gln Lys Gly Thr Arg Gln Leu Leu Gly Ser Arg Thr Gln Leu
 20 25 30
 Glu Leu Val Leu Ala Gly Ala Ser Leu Leu Leu Ala Ala Leu Leu
 35 40 45
 Leu Gly Cys Leu Val Ala Leu Gly Val Gln Tyr His Arg Asp Pro
 50 55 60

Ser	His	Ser	Thr	Cys	Leu	Thr	Glu	Ala	Cys	Ile	Arg	Val	Ala	Gly	
				65					70					75	
Lys	Ile	Leu	Glu	Ser	Leu	Asp	Arg	Gly	Val	Ser	Pro	Cys	Glu	Asp	
				80					85					90	
Phe	Tyr	Gln	Phe	Ser	Cys	Gly	Gly	Trp	Ile	Arg	Arg	Asn	Pro	Leu	
				95					100					105	
Pro	Asp	Gly	Arg	Ser	Arg	Trp	Asn	Thr	Phe	Asn	Ser	Leu	Trp	Asp	
				110					115					120	
Gln	Asn	Gln	Ala	Ile	Leu	Lys	His	Leu	Leu	Glu	Asn	Thr	Thr	Phe	
				125					130					135	
Asn	Ser	Ser	Ser	Gln	Ala	Glu	Gln	Lys	Thr	Gln	Arg	Phe	Tyr	Leu	
				140					145					150	
Ser	Cys	Leu	Gln	Val	Gln	Arg	Ile	Glu	Gln	Leu	Gly	Ala	Gln	Pro	
				155					160					165	
Leu	Arg	Asp	Leu	Ile	Gln	Lys	Ile	Gly	Gly	Trp	Asn	Ile	Thr	Gly	
				170					175					180	
Pro	Trp	Asp	Gln	Asp	Asn	Phe	Met	Glu	Val	Leu	Lys	Ala	Val	Ala	
				185					190					195	
Gly	Thr	Tyr	Arg	Ala	Thr	Pro	Phe	Phe	Thr	Val	Tyr	Ile	Ser	Ala	
				200					205					210	
Asp	Ser	Lys	Ser	Ser	Asn	Ser	Asn	Val	Ile	Gln	Val	Asp	Gln	Ser	
				215					220					225	
Gly	Leu	Phe	Leu	Pro	Ser	Arg	Asp	Tyr	Tyr	Leu	Asn	Arg	Thr	Ala	
				230					235					240	
Asn	Gln	Lys	Val	Leu	Thr	Ala	Tyr	Leu	Asp	Tyr	Met	Gln	Glu	Leu	
				245					250					255	
Gly	Met	Leu	Leu	Gly	Gly	Arg	Pro	Thr	Ser	Thr	Arg	Gln	Gln	Met	
				260					265					270	
Gln	Gln	Val	Leu	Gln	Leu	Glu	Ile	Gln	Leu	Ala	Asn	Ile	Thr	Val	
				275					280					285	
Pro	Gln	Asp	Gln	Arg	Arg	Asp	Glu	Glu	Lys	Ile	Tyr	His	Lys	Met	
				290					295					300	
Ser	Ile	Ser	Glu	Leu	Gln	Ala	Leu	Ala	Pro	Ser	Met	Asp	Trp	Leu	
				305					310					315	
Glu	Phe	Leu	Ser	Phe	Leu	Leu	Ser	Pro	Leu	Glu	Leu	Ser	Asp	Ser	
				320					325					330	
Glu	Pro	Val	Val	Val	Tyr	Gly	Met	Asp	Tyr	Leu	Gln	Gln	Val	Ser	
				335					340					345	

Glu	Leu	Ile	Asn	Arg	Thr	Glu	Pro	Ser	Ile	Leu	Asn	Asn	Tyr	Leu	351	355	360
Ile	Trp	Asn	Leu	Val	Gln	Lys	Thr	Thr	Ser	Ser	Leu	Asp	Arg	Arg	365	370	375
Phe	Glu	Ser	Ala	Gln	Glu	Lys	Leu	Leu	Glu	Thr	Leu	Tyr	Gly	Thr	380	385	390
Lys	Lys	Ser	Cys	Val	Pro	Arg	Trp	Gln	Thr	Cys	Ile	Ser	Asn	Thr	395	400	405
Asp	Asp	Ala	Leu	Gly	Phe	Ala	Leu	Gly	Ser	Leu	Phe	Val	Lys	Ala	410	415	420
Thr	Phe	Asp	Arg	Gln	Ser	Lys	Glu	Ile	Ala	Glu	Gly	Met	Ile	Ser	425	430	435
Glu	Ile	Arg	Thr	Ala	Phe	Gln	Glu	Ala	Leu	Gly	Gln	Leu	Val	Trp	440	445	450
Met	Asp	Glu	Lys	Thr	Arg	Gln	Ala	Ala	Lys	Glu	Lys	Ala	Asp	Ala	455	460	465
Ile	Tyr	Asp	Met	Ile	Gly	Phe	Pro	Asp	Phe	Ile	Leu	Glu	Pro	Lys	470	475	480
Glu	Leu	Asp	Asp	Val	Tyr	Asp	Gly	Tyr	Glu	Ile	Ser	Glu	Asp	Ser	485	490	495
Phe	Phe	Gln	Asn	Met	Leu	Asn	Leu	Tyr	Asn	Phe	Ser	Ala	Lys	Val	500	505	510
Met	Ala	Asp	Gln	Leu	Arg	Lys	Pro	Pro	Ser	Arg	Asp	Gln	Trp	Ser	515	520	525
Met	Thr	Pro	Gln	Thr	Val	Asn	Ala	Tyr	Tyr	Leu	Pro	Thr	Lys	Asn	530	535	540
Glu	Ile	Val	Phe	Pro	Ala	Gly	Ile	Leu	Gln	Ala	Pro	Phe	Tyr	Ala	545	550	555
Arg	Asn	His	Pro	Lys	Ala	Leu	Asn	Phe	Gly	Gly	Ile	Gly	Val	Val	560	565	570
Met	Gly	His	Glu	Leu	Thr	His	Ala	Phe	Asp	Asp	Gln	Gly	Arg	Glu	575	580	585
Tyr	Asp	Lys	Glu	Gly	Asn	Leu	Arg	Pro	Trp	Trp	Gln	Asn	Glu	Ser	590	595	600
Leu	Ala	Ala	Phe	Arg	Asn	His	Thr	Ala	Cys	Met	Glu	Glu	Gln	Tyr	605	610	615
Asn	Gln	Tyr	Gln	Val	Asn	Gly	Glu	Arg	Leu	Asn	Gly	Arg	Gln	Thr	620	625	630

Leu Gly Glu Asn Ile Thr Asp Asn Gly Gly Leu Lys Ala Ala Tyr	
635	645
Asn Ala Tyr Lys Ala Trp Leu Arg Lys His Gly Glu Glu Gln Gln	
650	660
Leu Pro Ala Val Gly Leu Thr Asn His Gln Leu Phe Phe Val Gly	
665	675
Phe Ala Gln Val Trp Cys Ser Val Arg Thr Pro Glu Ser Ser His	
680	690
Glu Gly Leu Val Thr Asp Pro His Ser Pro Ala Arg Phe Arg Val	
695	705
Leu Gly Thr Leu Ser Asn Ser Arg Asp Phe Leu Arg His Phe Gly	
710	720
Cys Pro Val Gly Ser Pro Met Asn Pro Gly Gln Leu Cys Glu Val	
725	735

Trp

+010+ 527
 +011+ 4008
 +012+ DNA
 +013+ Homo sapiens

+020+
 +021+ unsure
 +022+ 1473, 3373, 4057-4058, 4070
 +023+ unknown base

+040+ 527
 ggcaggccct ccgcctcag cactccagcc tccctccctc cgcacgctcc 50
 cgcgcctcc tccctccctc ctcccagct gtcacgttc cgtcatgcgc 100
 agctccagg cccagccagg ccagctgctg cctctagggc tgcctgctgc 150
 cggctccagg ccggccagg ggcacggccc agagccccc ggctgcacca 200
 tcccttctga gaaggagccg ctgcacgttc ggggagccgc aggtaggctg 250
 cgcacccggg gaggcgggg cggggagtcg ggcctcgggc gactcagccc 300
 cag ccaggag ggggcgggg ggcaggctg ctgggcgggc cgggcggccc 350
 ggaaggctgg cgggggcaga agggcgcggt gcctgggacc cgggacccgc 400
 gggtagcccc cggggcgcca caggcgcca gctgggcaga ggcccccaga 450
 caagccctgc ccgcaggct gcaccttcgg cgggaagctc tatgccttgg 500
 acgagacgtg gcacccggac ctaggggagc cattcggggt gatgcgctgc 550

gtgctgtgcg cctgcgaggg gacgtggggg cgcctgacca ggggccccgg 600
 cagggtcagc tgcagaaca tcaaacacaga gtgcaccaac ccggccctgtg 650
 ggcagcccgj ccagctgcgg ggacactgct gccagacctg cccccaggac 700
 ttctgggggc tgcctgacagg gccgaggtcg caggcggttg cacgagcccg 750
 agtctcgctg ctgcgctcta gctccgctt ctctatctcc tacaggcggc 800
 tggacggccc taccaggatc cgtctctcag actccaatgg cagtgtcccg 850
 tctgagcacc ctgcagcccc caccacaagat ggcctgggtct gtgggggtgtg 900
 gggggcagtg cctcggttgt ctctggggct ccttagggca gaacagctgc 950
 atgtggcact tctgacactc actcaccctt cagggggaggt ctggggggct 1000
 ctcacccggc accgggcccc gtccccagag accttcagtg ccaccccgac 1050
 tctagaaggc cccccccagc agggcgtagg gggcatcacc ctgctcactc 1100
 ccagtgacac agaggactcc ttgcattttt tgcctgctct ccgagggcctt 1150
 gcaggactaa cccaggttcc cctgaggctc cagattctac accaggggca 1200
 gctaactgga gaacttcagg ccaatgtctc agcccaggaa ccaggctctg 1250
 ctgaggtgct gcccaacctg acagtcacag agatggactg gctgtgtctg 1300
 ggggagctgc agatggcccc ggagtgggca ggcaggccag ggcctggcat 1350
 cagtggaac attgctgcca ggaagagctg cgactcccg caaagtgtcc 1400
 tctgtggggc caatgcctcg atcccagtc aaacgggtgc tgcgggtcca 1450
 gccagctcca ctctgctagg aaatggcccc ctgacccccc aggtgcaatt 1500
 ggtagggaac accagtgagg tgggtggccat gacactggaa accaagcccc 1550
 agcggagggc ccagcccact gtcctgtgcc acatggctgg cctatccccc 1600
 cctgccccca ggcctgggtt atctgcctcg ggcctgggtg cccgaggggc 1650
 tcatatgctg ctgcagaatg agctcttccc gaactgggc accaaggact 1700
 ccccagacgg agagcttcgg gggcaacctg gctgccccgc cctactgtgg 1750
 ggcatagggc ccgccccgcc cgtgccccca gcaggagccc tgggtctacc 1800
 cctgtggaag agccaagcag cagggcacgc ctgggtttcc ctggatccc 1850
 actgtccact gcactatgaa gtgctgctgg ctgggcttgg tggctcagaa 1900
 caaggcactg tcactgcccc cctccttggg cctcctggaa cgcaggggc 1950
 tggcgggctg ctgaagggat tctatggctc agaggccacg ggtgtggtga 2000

aggacotgga gccggaactg ctgcggcacc tggcaaaagg catgggttcc 2050
ctgatgacca ccaccaaggt agccccagag gggagctccg agggcagcct 2100
ctctccccag gtgcacatag ccaacccaatg tgaggttggc ggaactgcgc 2150
tggagggcgc cggggcccgag ggggtgcggg cggctggggc cccggataca 2200
gcctctgtct cgcgcgcctgt ggtgcctggc ctcccgccc tagcgccgc 2250
caaacctggc ggtcctgggc ggcccccaga ccccaacaca tgcctcttcg 2300
aggggcagca gcgccccccac ggggctcgct gggcgcccaa ctacgacccg 2350
ctctgctcac tctgcacctg ccagagagga acggtgacct ggcacccggt 2400
ggtgtgcaca ccgcccagct gccacacccc ggtgcaggct cccgaccagt 2450
gctgcctctt ttgcctgggc tgcattttt atggtgacgc gactggggg 2500
gcagcgggta ccggttggca cccgctgtg cccccccttg gcttaattaa 2550
gtgtgtctgc tgcacctgca agcagggggg cactggagag gtgcactgtg 2600
agaaggtgca gtgtccccg ctggcctgtg cccagcctgt gcgtgtcaac 2650
cccacggact gctgcacaca gtgtccaggt gaggccccc cccagctggg 2700
ggaccccacg ccaggctgat ggccccgggg ctgcctttt gctgggcagt 2750
ggtccccaga gactcagagc tggcaccctt cagtgcctcc gttcggagag 2800
atgagctgta tccctgcag atgtggggtg agtggggagc agaggcttgt 2850
gtgaggtggg taactgggagc ctggtctgga gtaggagac cttcccgagg 2900
aggtccctga agaaactgaa ggtcactgtg tcccagtgcc tctgggggac 2950
actcagtgtc tgcctctgtt cgtaccaggc aggggtgcct cactgtgagc 3000
gggatgactg ttccctgcca ctgtcctgtg gctcggggaa ggagagtoga 3050
tgcctgtccc gctgcacggc ccacccggcg cgttaagtga ggcgtccagg 3100
gtcagcagct gtgagtggag ggcaccctg cctgtgggac tccgtatcag 3150
ggaagggagc actcactgtg tgcaggacaa gtgcagcctg cctcacaagt 3200
gcattccaa tccacctca cagcaacctg gtgggaattgt tatttatgac 3250
ctttcttta caaatgagat tctgaagct cagagaaatt aagcaacgag 3300
atgaaggtca cccagctgtg tgcactgacc tgtttagaaa taactggcct 3350
ttctgggacc aaggcaggga tgccttgccc tgcctctat gcctctctgt 3400

geetctccac tccctctccc ctccctccac attccctccc ttctgtctcc 3450
 agcagcccca gagaccagaa ctgattccaga gctggagaaa gaagccgaag 3500
 gctcttaggg agcagccaga gggccaagtg accaagagga tggggcctga 3550
 gctggggaag ggggtggcatc gaggaccttc ttgcattctc ctgtgggaag 3600
 ccagtgccct ttgtctctct gtccctgcctc cactccccc cccactacct 3650
 cggggaacca cagctccaca agggggagag gcagctgggc cagaccgagg 3700
 tcacagccac tcccaagtcct gcccctgccac cctgggcctc tgtccctggaa 3750
 gcccccacccc ttctctctctg tacataatgt cactgggctg ttgggatttt 3800
 caatttatct tcaactagca ccaagggccc cggacactcc actccctgctg 3850
 cccctgagct gagcagagtc attattggag agttctgtat ttattaaaa 3900
 atttcttttt cagtcttttg gcatgaggtt ggcctcttct ggccaggaac 3950
 ctgagtgggg cctgggtggag aaggggonga gactaggagg tgagagagag 4000
 gactctgac aactggggag ctgaaagaga cctggagagg cagaggatag 4050
 cgtggcnntt ggcctggcatn cctgggttcc gcagaggggc tggggatggt 4100
 tcttgagatg gctagagac tcaagaattt aggggaagtag aagcaggatt 4150
 ctgactcaag tttagtttcc cactctgctg gcctgtttgc tgaactcatg 4200
 ttggaagtct cccagagag agaatcaaag gtgtaccag cccctctctc 4250
 cctccctccc tcccttccc ttctttccc tccctccc tccctcccc 4300
 tccctccc 4308

<110> 523
 <111> 1285
 <112> DNA
 <113> Homo sapiens

<400> 523
 ggccgaacgg ggggtgctgg cggcggccgt gatggctggt gacggcgggg 50
 ccgggcaggg gaccggggcc ggggcccggg agcgggccc agcccgggag 100
 cctgaatca ccgcctggcc cgaactccac atgaacgtc cgtgcagga 150
 cctcggagct ggcagcaacg tgggattcca gaaggggaca agacagctgt 200
 caggctacg caccagctg gagctggctc tagcaggtgc ctctctactg 250
 ctggctccac tgctctctgg ctgccttctg gcctagggg tccagtacca 300
 cagagaccca tcccacagca cctgccttac agaggcctgc attcagctgg 350

ctggaa caat cctggagtc cttggaccag gggtagagcc ctgtgaggac 400
 ttttaacagt tctcctgttg gggcttgatt cggagggaac ccttgcccga 450
 tgggtgttct cgtctggaac ccttcaacag cctctgggac caaaaaccag 500
 ccatactgaa gcacctgctt gaaaaacaca ccttcaactc cagcagtcaa 550
 gctgagcaga agacacagcg cttctaccta tcttgccctac aggttgagcg 600
 cattgaggag ctgggagccc agccactgag agacctcatt gagaagattg 650
 gtgttttgaa cattacgggg ccttgggacc aggacaactt tatggaggtg 700
 ttgaagtcag tagcagggac ctacagggcc accccattct tcacccgtta 750
 catcagtgcc gaactataga gttccaacag caatgttctc caggtggacc 800
 agtctgggtt cttcttgccc tctcgggatt actactaaa cagaactgcc 850
 aatgagaaag taaggacat cttccgaac cccatcccta cccctggctg 900
 agctgggtct atccctgttg acttttccct ttgccaaggg ccagagcagg 950
 caaggtgagc ctatccgtgc accagtcaa caaacctgcc ccccttctct 1000
 tctctcttc ttcctccctc cctcccttc ttcctcttc ccttccctcc 1050
 tctctcttat tctcttagta ggtctcatag acacctactg tctgcccagg 1100
 ccagtggggg aattcggaga tataagtctc cgagccattg ccacagggaag 1150
 cgttcagtgt cgatgggttc atggacctag ataggctgat aacaaagctc 1200
 acaagagggt cctgaggatt caggagagac ttatggagcc agcaaaagtct 1250
 tctgagagag attgcatttg agccaggtcc tctag 1285

<210> 509
 <211> 1380
 <212> DNA
 <213> Homo sapiens

<400> 529
 atgctacta ccttccaact aagaatgaga tctgtctccc cgttggcacc 50
 tgcagggcc ccttctatgc ccgcaaccac cccaaggccc tgaacttcgg 100
 tggcatcggt gtggtcatgg gccttgagtt gacgcattgc ttgatgacc 150
 aagggcgaga gtatgacaaa gaagggaacc tggggccctg gtggcagaat 200
 ggtccctgg cagccttcgg gaaccacacg gcctgcattg aggaacagta 250
 caatcaatac caggtcaatg gggagagggt caacggccgc cagacgtctg 300

gggagaacat tgctgacaac gggggggtga aggttgcta caatgcttac 350
 aaagcatggg tgagaaagca tggggaggag cagcaactgc cagcgtggg 400
 jctcaccac accagctct tcttctggg atttgccag gtgtggtgt 450
 tggctcgcac accagagagc tctcagagg ggttggtgac cgacccccc 500
 agccctgcgc gcttccggt gtctgggact ctctccaaact cccgtgactt 550
 ctggtggcac ttgggtgac ctgtcggctc cccatgaac ccagggcagc 600
 tgtgtgaggt gtggttagac tggatcaggg gagaaatggc cagctgtcac 650
 cagacctggg gcagctctcc cgacaaagct gtttgcctt gggctgggag 700
 gaagcaactg caagctgggc tgggtctagt cctccccc cccaggtgac 750
 atgagtacag accctctcca atcacacat tgtgcctctg ctttgggggt 800
 gcccctgctt ccagcagagc cccacacatt cactgtgaca tcttccgtg 850
 ccacccctgc tggagaggt ctgggtgggg aggcagttc ccctaggaag 900
 gagtctgctt cttctgcacc caggctcact cagcctggcg gccatggggc 950
 ctgctgtgac tggccactg cgacccacag gctgggtgg tgtacctct 1000
 ggacttctcc ccaggctcac ccagtggca cttaggggtg gactcagctc 1050
 tgtctggctc accctcaggg gctaccccca cctcacctg tgtctctgt 1100
 gccactgctc ccagtgtgc tgtgacatt cactgacagc tctagtggc 1150
 agcccaaggg cctctgaaag cctctgtgtg cccactgtt cctggggctg 1200
 agaggggaag tgcatatgtg taggggtgac tggttcctgt gtcttagggc 1250
 caaagctta gcaaatgatt gattctcctt ggacaaagca ggaaagcaga 1300
 tagagcaggg aaaaggaaga acagagtta ttttacaga aaagaggggtg 1350
 ggaggggtgt gtcttggccc ttataggac 1380

(210) 536

(211) 39

(212) DNA

(213) Artificial Sequence

(220)

(223) Synthetic oligonucleotide probe

(400) 530

aaagcagtc agccagcagt agagaggcac ctgctaaga 39

(210) 531

(211) 24

<112> DNA
<113> Artificial Sequence

<114>
<115> Synthetic oligonucleotide probe

<116> 531
agcgagctgg agctggtctt agca 24

<117> 532
<118> 24
<119> DNA
<120> Artificial Sequence

<121>
<122> Synthetic oligonucleotide probe

<123> 533
gtactggac ccctagggcc acaa 24

<124> 533
<125> 21
<126> DNA
<127> Artificial Sequence

<128>
<129> Synthetic oligonucleotide probe

<130> 535
ccctccagcc gagaccagt g 21

<131> 536
<132> 21
<133> DNA
<134> Artificial Sequence

<135>
<136> Synthetic oligonucleotide probe

<137> 537
gtctctataa gggccaagac c 21

<138> 538
<139> 44
<140> DNA
<141> Artificial Sequence

<142>
<143> Synthetic oligonucleotide probe

<144> 539
gataactct agatcgcgag cggcgcacct tttttttttt tttt 44

<145> 540
<146> 16
<147> DNA
<148> Artificial Sequence

4221+
4221+ Synthetic oligonucleotide probe

4400+ 536
cagacgggtg ggtcga 16

4210+ 537
4211+ 21
4212+ DNA
4213+ Artificial Sequence

4220+
4220+ Synthetic oligonucleotide probe

4400+ 537
caggcgtgat ggctggtag g 21

4210+ 538
4211+ 10
4212+ DNA
4213+ Artificial Sequence

4220+
4220+ Synthetic oligonucleotide probe

4400+ 538
ggagactcc ttctatggg 20

4210+ 539
4211+ 31
4212+ DNA
4213+ Artificial Sequence

4220+
4220+ Synthetic oligonucleotide probe

4400+ 539
atgacttcat ggctcttga a 21

4210+ 540
4211+ 22
4212+ DNA
4213+ Artificial Sequence

4220+
4220+ Synthetic oligonucleotide probe

4400+ 540
cggatctgtg tgaggccatg cc 22

4210+ 541
4211+ 24
4212+ DNA
4213+ Artificial Sequence

4220+

<223> Synthetic oligonucleotide probe

<400> 541

aaaagtaacc acggaggtca agat 24

<210> 542

<211> 11

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 541

ccctctctcga gactgaaagc t 21

<210> 543

<211> 11

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 543

tcaggttgtct tctctctcgg cg 22

<210> 544

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 544

gagtgaggtca ggttcca 17

<210> 545

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 545

ggttcgttcca ggtgtgtga 19

<210> 546

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 546
cttctctcacc acctgcgcacg gg 22

<210> 547
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 547
ggtagggcgtt cctatagatg gtt 23

<210> 548
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 548
agatgtggat gaatgcagtg cta 23

<210> 549
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 549
atcaaacacg ccggcagtta ctgg 24

<210> 550
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 550
acagagtgta ccgtctgcag aca 23

<210> 551
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 551
agcctctgg tgcactct 19

<210> 552
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 552
agactccctg agcgagcaga ttccc 25

<210> 553
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 553
actcgccagt cagcagtcct 20

<210> 554
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 554
aatctccat ctccagtcct ccag 24

<210> 555
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 555
ctccagcggc aacagccggc c 21

<210> 556
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 556
ctggccaagg gctgc 15

<210> 557

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 557
tggtggataa ccaacaagat gg 22

<210> 558
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 558
gagctctccat ccacaccact cttaaagttc tcaa 34

<210> 559
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 559
caggtgctct ttccagtcac gttt 24

<210> 560
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 560
tgcaccattct caggscaaga g 21

<210> 561
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 561
cagtaatgcc atttgactgc ctgcac 26

<210> 562
<211> 19
<212> DNA

<213> Artificial Sequence

<220>

<23> Synthetic oligonucleotide probe

<400> 562

tgactggaat cacatgaca 19

<210> 563

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<23> synthetic oligonucleotide probe

<400> 563

ctctggcagac acccaatcct 20

<210> 564

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<23> Synthetic oligonucleotide probe

<400> 564

gaacctgaag gcttcgggc t 21

<210> 565

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<23> Synthetic oligonucleotide probe

<400> 565

gagagaggga aggcagctat gtc 23

<210> 566

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<23> Synthetic oligonucleotide probe

<400> 566

gaagcctct ctttcacctg t 21

<210> 567

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 567

ccatccgtgtg cagctgacac acagc 25

<210> 568

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 568

ggcaggctat gaggtcctt 20

<210> 569

<211> 13

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 569

ttcaagttcc tgaagccgat tat 25

<210> 570

<211> 13

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 570

cccaactccc tccccagtgc cct 25

<210> 571

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 571

tttgggaagg tagaatttc ttgtat 26

<210> 572

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 572
ccattctgcc tcccaattct 20

<210> 573
<211> 14
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 573
ctctctccgt ccccttcttc cact 24

<210> 574
<211> 10
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 574
ctgagcactg ccttgcatta 20

<210> 575
<211> 10
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 575
ctctgcagacg cgatggataa 20

<210> 576
<211> 10
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 576
ccgaaaataa aacatcgccc ctctctg 26

<210> 577
<211> 10
<212> DNA
<213> Artificial Sequence

<214>
<215> Synthetic oligonucleotide probe

<400> 577

caagtgggcct ttcacactga 20

<210> 578

<211> 15

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 578

acatgacaca gcagtatgct gctct 25

<210> 579

<211> 16

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 579

aaagtctctgt tcaatccag cggctc 26

<210> 580

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 580

atgcacagggc tttttctggt aa 22

<210> 581

<211> 12

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 581

gcagggaacc ttogaatctg ag 22

<210> 582

<211> 19

<212> RNA

<213> Artificial Sequence

<220>

<221> Synthetic oligonucleotide probe

<400> 582

acacctcagg cacctgagag aggaactct 29

<210> 583
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 583
gacagggccag tacacctgca a 21

<210> 584
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 584
gacgggtggga tctgtgagaa a 21

<210> 585
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 585
caacaactgct gaccccgccc a 21

<210> 586
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 586
ccagggtacg acatgctgca 20

<210> 587
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 587
aaactccaac ctgtatcaga tgca 24

<210> 588
<211> 25

<110> DNA
<112> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 588
gagccagcc attagactct aagcc 25

<110> 589
<111> 19
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 589
gagccagcc attagactct aagcc 19

<110> 590
<111> 21
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 590
gagccagcc attagactct aagcc 21

<110> 591
<111> 25
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 591
gagccagcc attagactct aagcc 25

<110> 592
<111> 25
<112> DNA
<113> Artificial Sequence

<120>
<210> Synthetic oligonucleotide probe

<400> 592
gagccagcc attagactct aagcc 25

<110> 593
<111> 18
<112> DNA
<113> Artificial Sequence

4220+
4223+ Synthetic oligonucleotide probe

4400+ 593
cttgaatag aagacttctg gacaattt 28

4210+ 594
4211+ 30
4212+ DNA
4213+ Artificial Sequence

4221+
4223+ Synthetic oligonucleotide probe

4400+ 594
ttgcaactgg gaatatacca cgacatgaga 30

4210+ 595
4211+ 26
4212+ DNA
4213+ Artificial Sequence

4222+
4223+ Synthetic oligonucleotide probe

4400+ 595
tagggtycta atttgtgcta taacct 26

4210+ 596
4211+ 26
4212+ DNA
4213+ Artificial Sequence

4223+
4223+ Synthetic oligonucleotide probe

4400+ 596
aggtctgagt ctctgcttga 20

4210+ 597
4211+ 29
4212+ DNA
4213+ Artificial Sequence

4224+
4223+ Synthetic oligonucleotide probe

4400+ 597
tctaaatacc attttctctt ggtcc 25

4210+ 598
4211+ 25
4212+ DNA
4213+ Artificial Sequence

4225+

<223> Synthetic oligonucleotide probe

<400> 598

aaacagtagc cattaacaag tca 23

<210> 599

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 599

caagcgccca gggttattga 20

<210> 600

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 600

gaclacaagg cgctcagcta 20

<210> 601

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 601

ccggctgggt ctcaactctc c 21

<210> 602

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 602

cgttcgtgca ggtgtgtga 19

<210> 603

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

4400 603
tttactcacc acctggcgacg gg 22

4210 604
4211 13
4212 DNA
4213 Artificial Sequence

4220
4223 Synthetic oligonucleotide probe

4400 604
ggttaggcgggt cctatagatg gtt 23

4210 605
4211 13
4212 DNA
4213 Artificial Sequence

4220
4223 Synthetic oligonucleotide probe

4400 605
agatgtggat gaatgcagtg cta 23

4210 606
4211 14
4212 DNA
4213 Artificial Sequence

4220
4223 Synthetic oligonucleotide probe

4400 606
atcacacacg ccggcagtta ctgg 24

4210 607
4211 13
4212 DNA
4213 Artificial Sequence

4220
4223 Synthetic oligonucleotide probe

4400 607
acacagtgta ccgtctgcag aca 23

4210 608
4211 19
4212 DNA
4213 Artificial Sequence

4220
4223 Synthetic oligonucleotide probe

4400 608
agcctcctgg tgcactct 19

<310> 609
<311> 25
<312> DNA
<313> Artificial Sequence

<320>
<323> Synthetic oligonucleotide probe

<400> 609
ggactccctg agcgagcaga tttcc 25

<310> 610
<311> 10
<312> DNA
<313> Artificial Sequence

<320>
<323> Synthetic oligonucleotide probe

<400> 610
gctgggcagt cactgctct 20

<310> 611
<311> 3640
<312> DNA
<313> Homo Sapien

<400> 611
ccacacgcgc ccagccgcgc gagaattaga cacactccgc acgccggcca 50
aaccaaccga gaggagggga ggcaaaaaca ccgaaaaaca aaaagagaga 100
aacaacaccc aacaactggg gtggggggga gaaagaaaga aaagaaaccc 150
accacccccc caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 200
ctgtggcgcg ccgcctgggt ccggggaaga ctgcacaga ccagggggtg 250
ggggagtgcg agctgaaaga tgcctggagag tgagcagccc tagcagggat 300
cgacatgatg ctgttggtgc agggctgctg ctgctcgaac cagtggctgg 350
cggcggtgct cctcagcctg tgcctgcctg tactctctg cctcccggt 400
ggacagagtg tggacttccc ctgggggggc gtggacaaca tgatggtcag 450
aaaaggggac acggcggtgc ttaggtgtta tttggaagat ggagcttcaa 500
agggctgcct gctgaacccg tcaagtatta ttttggggg aggtgataag 550
ctgtcagtggt atcctcagat ttcaatttca acattgaata aaagggaata 600
cagcctccag atacagaatg tagatgtgac agatgatggc ccatacaagt 650
gttctgttca gactcaacat acaccagaa caatgcaggt gcatttaact 700

gtgcaagttc ctcccaagat atatgacatc tcbaatgata tgaccgtcaa 750
 tgaaggaaac aacgtcactc ttacttgttt ggccactggg aaaccagagc 800
 cttccatttc ttggcgacac atctcccat cagcaaaaac attcgaaaat 850
 ggacaatatt tggacattta tgggaattaca agggacccag ctgggggaata 900
 tgaatgcagt ggggaaaaatg ctgtgtcatt cccagatgtg aggaaaagtaa 950
 aagttgttgt caactttgtc cctactatcc aggaaattaa atctggccac 1000
 gtgacccccc gacgcagtggt cctgataaga tgtgaagggt caggtgtgac 1050
 gctccagac tttgaatggg acaaaggaga gaagaagctc ttcaatggcc 1100
 aacaaggaaat tattattcaa aattttagca caagatccat tctcactgtt 1150
 accaaagtga cacaggagca cttcggccat tatacctgtg tggctgcbaa 1200
 caagctaggg acaaccaatg ccagccctgac tcttaacctt ccaagtacag 1250
 cccagtatgg aattacccgg agcgtgtatg tctttttctc ctgcttgtac 1300
 cttgtgttga cactgtcttc ttccaccagc atattctacc tgaagaatgc 1350
 cattctacaa taaattcaaa gacccataaa aggtttttaa ggattctctg 1400
 aaagtgttga tggctggatc caactgtgta cagtttctta aaagccagct 1450
 gggatataat cagcagtgct tacatgggga tcatcgcttc ctgtagaatt 1500
 gctcattatg taaatacttt aattctactc ttttttgatt agctacatta 1550
 ccttgtgaag cagtaacatc tgtccttttt ttaagaactg aaagctctga 1600
 aattactttt agaggatatt aattgtgatt tcctgtttgt aattctacaac 1650
 tttccaaaag cattcagtca tggctgtgta ggttcgaggg tgtagtttac 1700
 aaaaaagaat attgcagtga atatgtgatt ctttaaggct gcaatacaag 1750
 cattcagttc cctgttttcaa caagagtcaa tccacattta caaagatgca 1800
 ttttttctt ttttgataaa aaagcaata atattgcctt cagattattt 1850
 cttcaaaaata taacacatat cttagatttt ctgcttgcat gatattcag 1900
 tttcaggaat gacccctgta atataactgg ctgtgcagct ctgcttctct 1950
 tctctgttaag ttcagcatgg gtgtgccttc atacaataat attttctctt 2000
 ctgtctccaa ctaacataaa atgttttctt aaatcttaca atttgaaagt 2050
 aaaaataaac cagagtgata aagttaaac atacactatc tctaagtaac 2100
 gaaggagcta ttggaactga aaaatctctt cctgcactga caatggggtt 2150

tgagaatttt gccccacact aactcagttc ttgtgatgag agacaattta 2200
 ataacagtat agtaaatata ccatatgatt tottttagttg tagctaaatg 2250
 ttagatccac cgtgggaaat cattcccttt aaaatgacag cacagtcac 2300
 tcaaaggatt gcctagcaat acagcatctt ttcccttcac tagtccaagc 2350
 caaaaatttt aagatgattt gtcagaaagg gcacaaagtc ctatcaocta 2400
 atattacaag agtttgtaag cgtcctcat taattttatt ttgtggcag 2450
 tattatgaca gtgcacctgg aggggatgga tatggatatg gacgttcac 2500
 agactataat ggcagaaacc aggggtggtta tgacccgtac tcaggaggaa 2550
 attacagaga caattatgac aactgaaatg agacatgcac ataatataga 2600
 tacacaagga ataattcttg atccaggatc gtccctccaa atggctgtat 2650
 ttataaaggt ttttgagct gcactgaagc atcttatttt atagtatata 2700
 aaccttttgt ttttaaattg acctgccaag gtagctgaag accttttaga 2750
 cagttccatc ttttttttta aattttttct gctattttaa agacaaatta 2800
 tgggaagttt gtcaaaaaaa aaaaaaaaaa aaaaaaaaaa 2840

<210> 612
 <211> 352
 <212> PRT
 <213> Homo Sapien

<400> 612
 Met Met Leu Leu Val Gln Gly Ala Cys Cys Ser Asn Gln Trp Leu
 1 5 10 15
 Ala Ala Val Leu Leu Ser Leu Cys Cys Leu Leu Pro Ser Cys Leu
 20 25 30
 Pro Ala Gly Gln Ser Val Asp Phe Pro Trp Ala Ala Val Asp Asn
 35 40 45
 Met Met Val Arg Lys Gly Asp Thr Ala Val Leu Arg Cys Tyr Leu
 50 55 60
 Glu Asp Gly Ala Ser Lys Gly Ala Trp Leu Asn Arg Ser Ser Ile
 65 70 75
 Ile Phe Ala Gly Gly Asp Lys Trp Ser Val Asp Pro Arg Val Ser
 80 85 90
 Ile Ser Thr Leu Asn Lys Arg Asp Tyr Ser Leu Gln Ile Gln Asn
 95 100 105
 Val Asp Val Thr Asp Asp Gly Pro Tyr Thr Cys Ser Val Gln Thr

110	115	120
Gln His Thr Pro Arg Thr Met Gln Val	His Leu Thr Val Gln Val	
125	130	135
Pro Pro Lys Ile Tyr Asp Ile Ser Asn	Asp Met Thr Val Asn Glu	
140	145	150
Gly Thr Asn Val Thr Leu Thr Cys Leu	Ala Thr Gly Lys Pro Glu	
155	160	165
Pro Ser Ile Ser Trp Arg His Ile Ser	Pro Ser Ala Lys Pro Phe	
170	175	180
Glu Asn Gly Gln Tyr Leu Asp Ile Tyr	Gly Ile Thr Arg Asp Gln	
185	190	195
Ala Gly Glu Tyr Glu Cys Ser Ala Glu	Asn Ala Val Ser Phe Pro	
200	205	210
Asp Val Arg Lys Val Lys Val Val Val	Asn Phe Ala Pro Thr Ile	
215	220	225
Gln Glu Ile Lys Ser Gly Thr Val Thr	Pro Gly Arg Ser Gly Leu	
230	235	240
Ile Arg Cys Glu Gly Ala Gly Val Pro	Pro Pro Ala Phe Glu Trp	
245	250	255
Tyr Lys Gly Glu Lys Lys Leu Phe Asn	Gly Gln Gln Gly Ile Ile	
260	265	270
Ile Gln Asn Phe Ser Thr Arg Ser Ile	Leu Thr Val Thr Asn Val	
275	280	285
Thr Gln Glu His Phe Gly Asn Tyr Thr	Cys Val Ala Ala Asn Lys	
290	295	300
Leu Gly Thr Thr Asn Ala Ser Leu Pro	Leu Asn Pro Pro Ser Thr	
305	310	315
Ala Gln Tyr Gly Ile Thr Gly Ser Ala	Asp Val Leu Phe Ser Cys	
320	325	330
Trp Tyr Leu Val Leu Thr Leu Ser Ser	Phe Thr Ser Ile Phe Tyr	
335	340	345
Leu Lys Asn Ala Ile Leu Gln		
350		

<210> 613
 <211> 1797
 <212> DNA
 <213> Homo Sapien

<400> 613
 agtgggttoga tgggaaggat ctttctccaa gtggttcctc ttgaggggag 50

cattttctgct ggctccagga ctttggccat ctataaagct tggcaatgag 100
aaataagaaa attctcaagg aggaacgagct cttgagttag acccaacaag 150
ctggttttca ccaaatggca atggagcctt tcgaaatcaa tgtccaaaag 200
cccaagagga gaaatggggg gaactttctc ctagctgtgg tggtcattcta 250
cctgatcctg ctccacgctg gggctggggc gctgggtggc caagttctga 300
atctgcaggc ggggtccgg gtccctggaga tgtatttctt caatgacact 350
ctgggggctg aggaacagcc gtccctctcc ttgctgcagt cagcacaccc 400
tggagaacac ctgggtcagg gtgcctcgag gctgcaagtc ctgcaggccc 450
aactcaactg ggtccggctc agccatgagc acttgctgca ggggttagac 500
aacttcaact agaaccagg gatgttcaga atcaaaggtg aacaaggcgc 550
cccaggtctt caaggtcaca agggggccat gggcatgctt ggtgcacctg 600
gccccccggg accacctgct gagaaggagc ccaagggggc tatgggacga 650
gatggagcaa caggccctct gggaccccaa gggccacggg gagtcaaggg 700
agaggccggc ctccaaggac cccagggctc tccaggggag caaggagcca 750
ctggcacccc aggaacccaa ggagagaagg gcagcaaggc ccatgggggt 800
ctcattggcc caaaaggggg aactgggaact aagggagaga aaggagacct 850
gggtctccca ggaagcaag gggacagggg catgaaagga gatgcagggg 900
tcattggggc tctgggagcc caggggagta aaggtagctt cgggagggca 950
ggcccaccag gtttggctgg tttccctgga gctaaaggag atcaaggaca 1000
acctggactg cagggctgtc cgggcccctc tggctgcagt ggacacccag 1050
gtgccaaggg tgagccggc agtgcctggc cccctggggc agcaggacct 1100
ccagggagcc ccgggagtcc aggagccaca ggcctgaaa gaaacaaagg 1150
ggacacagga cttcaaggac agcaaggag aaaaggagaa tcaggagttc 1200
caggccctgc aggtgtgaa ggagaacagg gtagccbagy gctggcaggt 1250
cccaagggag cccctggaca agctggccag aagggagacc agggagtcaa 1300
aggatctctt ggggagcaag gagtcaaggg agaaaaaggt gaaagaggtg 1350
aaaactcagt gtcctcagg attgtcggca gtagtaacct aggcggggct 1400
gaagtttact acagtggtaa ctgggggaca atttgcgatg acgagtggca 1450

aaattctgat gccatttgtt ttgtccgcat gctgggttac tccaaaggaa 1500
 gggccctgta caaagtggga gctggcactg ggcagatctg gctggataat 1550
 gtcagtgte ggggcacgga gactacctg tggagctgca ccaagaatag 1600
 ctggggccat catgactgca gccacgagga ggacgcagga gtggagtgca 1650
 ggtctgacc cggaaacct ttcacttctc tgcctccagag gtgtccctgg 1700
 gctcatatgt gggaaggcag aggatctctg aggagttccc tggggacaa 1750
 ccagcagcct ctggagaggg gccattaata aagctcaaca tcattga 1797

<210> 614
 <211> 520
 <212> PBT
 <213> Homo Sapien

<400> 614
 Met Arg Asn Lys Lys Ile Leu Lys Glu Asp Glu Leu Leu Ser Glu
 1 5 10 15
 Thr Gln Gln Ala Ala Phe His Gln Ile Ala Met Glu Pro Phe Glu
 20 25 30
 Ile Asn Val Pro Lys Pro Lys Arg Arg Asn Gly Val Asn Phe Ser
 35 40 45
 Leu Ala Val Val Val Ile Tyr Leu Ile Leu Leu Thr Ala Gly Ala
 50 55 60
 Gly Leu Leu Val Val Gln Val Leu Asn Leu Gln Ala Arg Leu Arg
 65 70 75
 Val Leu Glu Met Tyr Phe Leu Asn Asp Thr Leu Ala Ala Glu Asp
 80 85 90
 Ser Pro Ser Phe Ser Leu Leu Gln Ser Ala His Pro Gly Glu His
 95 100 105
 Leu Ala Gln Gly Ala Ser Arg Leu Gln Val Leu Gln Ala Gln Leu
 110 115 120
 Thr Trp Val Arg Val Ser His Glu His Leu Leu Gln Arg Val Asp
 125 130 135
 Asn Phe Thr Gln Asn Pro Gly Met Phe Arg Ile Lys Gly Glu Gln
 140 145 150
 Gly Ala Pro Gly Leu Gln Gly His Lys Gly Ala Met Gly Met Pro
 155 160 165
 Gly Ala Pro Gly Pro Pro Gly Pro Pro Ala Glu Lys Gly Ala Lys
 170 175 180
 Gly Ala Met Gly Arg Asp Gly Ala Thr Gly Pro Ser Gly Pro Gln

185	190	195
Gly Pro Pro Gly Val Lys Gly Glu Ala	Gly Leu Gln Gly Pro Gln	
200	205	210
Gly Ala Pro Gly Lys Gln Gly Ala Thr	Gly Thr Pro Gly Pro Gln	
215	220	225
Gly Glu Lys Gly Ser Lys Gly Asp Gly	Gly Leu Ile Gly Pro Lys	
230	235	240
Gly Glu Thr Gly Thr Lys Gly Glu Lys	Gly Asp Leu Gly Leu Pro	
245	250	255
Gly Ser Lys Gly Asp Arg Gly Met Lys	Gly Asp Ala Gly Val Met	
260	265	270
Gly Pro Pro Gly Ala Gln Gly Ser Lys	Gly Asp Phe Gly Arg Pro	
275	280	285
Gly Pro Pro Gly Leu Ala Gly Phe Pro	Gly Ala Lys Gly Asp Gln	
290	295	300
Gly Gln Pro Gly Leu Gln Gly Val Pro	Gly Pro Pro Gly Ala Val	
305	310	315
Gly His Pro Gly Ala Lys Gly Glu Pro	Gly Ser Ala Gly Ser Pro	
320	325	330
Gly Arg Ala Gly Leu Pro Gly Ser Pro	Gly Ser Pro Gly Ala Thr	
335	340	345
Gly Leu Lys Gly Ser Lys Gly Asp Thr	Gly Leu Gln Gly Gln Gln	
350	355	360
Gly Arg Lys Gly Glu Ser Gly Val Pro	Gly Pro Ala Gly Val Lys	
365	370	375
Gly Glu Gln Gly Ser Pro Gly Leu Ala	Gly Pro Lys Gly Ala Pro	
380	385	390
Gly Gln Ala Gly Gln Lys Gly Asp Gln	Gly Val Lys Gly Ser Ser	
395	400	405
Gly Glu Gln Gly Val Lys Gly Glu Lys	Gly Glu Arg Gly Glu Asn	
410	415	420
Ser Val Ser Val Arg Ile Val Gly Ser	Ser Asn Arg Gly Arg Ala	
425	430	435
Glu Val Tyr Tyr Ser Gly Thr Trp Gly	Thr Ile Cys Asp Asp Glu	
440	445	450
Trp Gln Asn Ser Asp Ala Ile Val Phe	Cys Arg Met Leu Gly Tyr	
455	460	465
Ser Lys Gly Arg Ala Leu Tyr Lys Val	Gly Ala Gly Thr Gly Gln	

470	475	480
Ile Trp Leu Asp Asn Val Gln Cys Arg Gly Thr Glu Ser Thr Leu		
485	490	495
Trp Ser Cys Thr Lys Asn Ser Trp Gly His His Asp Cys Ser His		
500	505	510
Glu Glu Asp Ala Gly Val Glu Cys Ser Val		
515	520	

<310> 615
 <311> 647
 <312> DNA
 <313> Homo Sapien

<400> 615
 cccacgggtc cgaaggcaga caaaggttca ttgttaaaga agtccttcc 50
 agcaactcct ctcttctcct ttggccaaa ctcccccagt gagtgtgagc 100
 atttaagaag catctctctgc caagaccaaa aggaaagaag aaaaagggac 150
 aaaagccaaa atgaaaactga tggtaacttgt ttccaccatt gggctaactt 200
 tgcctgtagg agttcaagcc atgcttgcaa atgctctctc ttgtacaga 250
 aagatactaa aagatccaaa ctgtccaaa cttccggaag gagtagctga 300
 cctgacacag attgagtca atgtccagga tcattctctgg gatgggaagg 350
 gatgtgagat gatctgttac tgcaacttca gagaattgct ctgtcgcca 400
 aaagacgttt tctttggacc aaagatctct ttcttgattc cttgcaaaa 450
 tcaatgagaa tcttcatgta ttctggagaa caccattcct gatttcacc 500
 aaactgcact acatcagtat aactgcattt ctagtcttcta tatagtgcac 550
 tagagcatag attctataaa ttcttacttg totaagacaa gtaaatctgt 600
 gttcaacaaag tagtaataaa agttaattca atctaaaaaa aaaaaaa 647

<310> 616
 <311> 94
 <312> PRT
 <313> Homo Sapien

<400> 616
Met Lys Leu Met Val Leu Val Phe Thr Ile Gly Leu Thr Leu Leu
1 5 10 15
Leu Gly Val Gln Ala Met Pro Ala Asn Arg Leu Ser Cys Tyr Arg
20 25 30
Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val
35 40 45

Ala	Asp	Leu	Thr	Gln	Ile	Asp	Val	Asn	Val	Gln	Asp	His	Phe	Trp
				50				55						60
Asp	Gly	Lys	Gly	Cys	Glu	Met	Ile	Cys	Tyr	Cys	Asn	Phe	Ser	Glu
				65				70						75
Leu	Leu	Cys	Cys	Pro	Lys	Asp	Val	Phe	Phe	Gly	Pro	Lys	Ile	Ser
				80				85						90
Phe	Val	Ile	Pro	Cys	Asn	Asn	Gln							
				95										

<110> 617
 <111> 2558
 <112> DNA
 <113> Homo Sapien

<400> 617
 cccacgggtc cgggacggg tgggtggac cccaggtctg gagcgaattc 50
 cagcctgcag ggtgataag cgaggcatta gtgagattga gagagacttc 100
 acccggcggc ggtgggttga gggcgcgag tagagcagca gcacaggcgc 150
 ggtcccggg aggcgggtc cgtcgcgcc gagatgtga atctcttca 200
 cgaaacgac tgggtgtgg ccacggcgcg ccgcccgggc tgggtgtgg 250
 ctggggcgct ggtgtggcg ggtggcttct ctctctcgg ctctctcttc 300
 ggtgtgttta taaaatcttc caatgaagct actaacatta ctccaaaagc 350
 taatatgaaa gcatttttgg atgaattgaa agctgagaac atcaagaagt 400
 tcttacataa ttttacacag ataccacatt tagcaggaac agaacaaaaa 450
 tttcagcttg caaagcaaat tcaatcccag tggaaagaat ttggcctgga 500
 ctctgttgag ctagctcatt atgatgtcct gttgtcctac ccaataaga 550
 ctcatcccaa ctacatctca ataattaatg aagatggaaa tgagattttc 600
 aacacatcat tatttgaac accctctcca ggatatgaaa atgtctcgga 650
 tattgtacca ccttcagtg cttctctctc tcaagggaatg ccagagggcg 700
 atctagtgtg tgttaactat gcacgaactg aagaattctt caaattggaa 750
 cgggacatga aaatcaattg ctctgggaaa attgtaattg ccagatatgg 800
 gaaagttttc agaggaaata aggttaaaaa tgcacagctg gcaggggcga 850
 aaggagtcac tctctactcc gacctgctg actactttgc tctgggggtg 900
 aagtcctatc cagacggttg gaatcttctt ggaggtggtg tccagcgttg 950

aaatatccta aatctgaatg gtgcaggaga cccctctaca ccagggttacc 1000
cagcaaatga atatgcttat agggctggaa ttgcagaggc tgttggtctt 1050
ccaagtatc ctgttcctcc aattggatac tatgatgcac agaagctcct 1100
agaaaaaatg ggtggctcag caccaccaga tagcagctgg agaggaagtc 1150
ccaaagtgc ctacaatgtt ggacctggct ttactggaaa cttctctaca 1200
caaaaagtca agatgcacat ccactctacc aatgaagtga cgagaattta 1250
caatgtgata ggtactctca gaggagcagt ggaaccagac agatatgtca 1300
ttctgggagg ccacggggac tcctgggtgt ttggtgggtat tgacccctag 1350
agtggagcag ctgttgctca tgaaattgtg aggagctttg gaacactgaa 1400
aaaggaaggg tggagaccta gaagaacaat tttgtttgca agctgggatg 1450
cagaagaatt tggctctctt ggttctactg agtgggcaga ggagaattca 1500
agaactcttc aagagctgg cgtggcttat attaatgctg actcatctat 1550
agaaggaaac taccctctga gagctgattg taccacgctg atgtacagct 1600
tggtaacaca ctaacaaaa gagctgaaaa gcctgatga aggtcttgaa 1650
ggcaaatctt tttatgaaag ttggactaaa aaaagtcttc cccagagttt 1700
cagtggcatg cccaggataa gcaaatggg atctggaaat gattctgagg 1750
tgtctctcca acgacttggg attgcttcag gcagagcacg gtatactaaa 1800
aattgggaaa caaaccaatt cagcggctat ccactgtatc acagtgtcta 1850
tgaaacatat gagtgggtgg aaaagtctta tgatccaatg cttaaatctc 1900
acctcaactg ggcccaggtt ccaggagggg tgggtttga gctagccaat 1950
tcctagtgc ccccttttga ttgtcgagat tatgctgtag ctttaagaaa 2000
gtatgctgac aaaatctaca gtattctctat gaaacatcca caggaaatga 2050
agacatacag tgtatcattt gattcacttt cttctgcagt aaagaatttt 2100
acagaaattg cttccaagtt cagtgcagaga cccaggact ttgacaaaag 2150
caacccaata gtattaagaa tgatgaatga ccaactcctg tttctggaaa 2200
gagcatttat tgatccaata gggttaccag acaggccttt ctataggcat 2250
gcatctatg ctccaagcag ccacaacaag tatgcagggg agtcattccc 2300
aggaatttat gatgctctgt ttgatattga aagcaaatg gacccttcca 2350
aggcctgggg agaagtgaag agacagattt atgttgacgc cttcacagtg 2400

caggcagctg cagagacttt gagtgaagta gacctagagg attttttaga 2450
 gaatccgtat tgaatttggtg tggatatgtca ctcagaaaaga atcgtaatgg 2500
 gtatatattgat aaatttttaaa attggtatat ttgaaataaa gttgaatatt 2550
 atatataa 2553

<210> 618
 <211> 750
 <212> PRT
 <213> Homo Sapien

<400> 618
 Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala
 1 5 10 15
 Arg Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly
 20 25 30
 Gly Phe Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser
 35 40 45
 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala
 50 55 60
 Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His
 65 70 75
 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe
 80 85 90
 Gln Leu Ala Lys Gln Ile Gln Ser Gln Trp Lys Glu Phe Gly Leu
 95 100 105
 Asp Ser Val Glu Leu Ala His Tyr Asp Val Leu Leu Ser Tyr Pro
 110 115 120
 Asn Lys Thr His Pro Asn Tyr Ile Ser Ile Ile Asn Glu Asp Gly
 125 130 135
 Asn Glu Ile Phe Asn Thr Ser Leu Phe Glu Pro Pro Pro Pro Gly
 140 145 150
 Tyr Glu Asn Val Ser Asp Ile Val Pro Pro Phe Ser Ala Phe Ser
 155 160 165
 Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala
 170 175 180
 Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met Lys Ile Asn
 185 190 195
 Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val Phe Arg
 200 205 210

Gly Asn Lys Val	Lys Asn Ala Gln Leu	Ala Gly Ala Lys Gly Val	215	220	225
Ile Leu Tyr Ser	Asp Pro Ala Asp Tyr	Phe Ala Pro Gly Val Lys	230	235	240
Ser Tyr Pro Asp	Gly Trp Asn Leu Pro	Gly Gly Gly Val Gln Arg	245	250	255
Gly Asn Ile Leu	Asn Leu Asn Gly Ala	Gly Asp Pro Leu Thr Pro	260	265	270
Gly Tyr Pro Ala	Asn Glu Tyr Ala Tyr	Arg Arg Gly Ile Ala Glu	275	280	285
Ala Val Gly Leu	Pro Ser Ile Pro Val	His Pro Ile Gly Tyr Tyr	290	295	300
Asp Ala Gln Lys	Leu Leu Glu Lys Met	Gly Gly Ser Ala Pro Pro	305	310	315
Asp Ser Ser Trp	Arg Gly Ser Leu Lys	Val Pro Tyr Asn Val Gly	320	325	330
Pro Gly Phe Thr	Gly Asn Phe Ser Thr	Gln Lys Val Lys Met His	335	340	345
Ile His Ser Thr	Asn Glu Val Thr Arg	Ile Tyr Asn Val Ile Gly	350	355	360
Thr Leu Arg Gly	Ala Val Glu Pro Asp	Arg Tyr Val Ile Leu Gly	365	370	375
Gly His Arg Asp	Ser Trp Val Phe Gly	Gly Ile Asp Pro Gln Ser	380	385	390
Gly Ala Ala Val	Val His Glu Ile Val	Arg Ser Phe Gly Thr Leu	395	400	405
Lys Lys Glu Gly	Trp Arg Pro Arg Arg	Thr Ile Leu Phe Ala Ser	410	415	420
Trp Asp Ala Glu	Glu Phe Gly Leu Leu	Gly Ser Thr Glu Trp Ala	425	430	435
Glu Glu Asn Ser	Arg Leu Leu Gln Glu	Arg Gly Val Ala Tyr Ile	440	445	450
Asn Ala Asp Ser	Ser Ile Glu Gly Asn	Tyr Thr Leu Arg Val Asp	455	460	465
Cys Thr Pro Leu	Met Tyr Ser Leu Val	His Asn Leu Thr Lys Glu	470	475	480
Leu Lys Ser Pro	Asp Glu Gly Phe Glu	Gly Lys Ser Leu Tyr Glu	485	490	495

Ser	Trp	Thr	Lys	Lys	Ser	Pro	Ser	Pro	Glu	Phe	Ser	Gly	Met	Pro	500	505	510
Arg	Ile	Ser	Lys	Leu	Gly	Ser	Gly	Asn	Asp	Phe	Glu	Val	Phe	Phe	515	520	525
Gln	Arg	Leu	Gly	Ile	Ala	Ser	Gly	Arg	Ala	Arg	Tyr	Thr	Lys	Asn	530	535	540
Trp	Glu	Thr	Asn	Lys	Phe	Ser	Gly	Tyr	Pro	Leu	Tyr	His	Ser	Val	545	550	555
Tyr	Glu	Thr	Tyr	Glu	Leu	Val	Glu	Lys	Phe	Tyr	Asp	Pro	Met	Phe	560	565	570
Lys	Tyr	His	Leu	Thr	Val	Ala	Gln	Val	Arg	Gly	Gly	Met	Val	Phe	575	580	585
Glu	Leu	Ala	Asn	Ser	Ile	Val	Leu	Pro	Phe	Asp	Cys	Arg	Asp	Tyr	590	595	600
Ala	Val	Val	Leu	Arg	Lys	Tyr	Ala	Asp	Lys	Ile	Tyr	Ser	Ile	Ser	605	610	615
Met	Lys	His	Pro	Gln	Glu	Met	Lys	Thr	Tyr	Ser	Val	Ser	Phe	Asp	620	625	630
Ser	Leu	Phe	Ser	Ala	Val	Lys	Asn	Phe	Thr	Glu	Ile	Ala	Ser	Lys	635	640	645
Phe	Ser	Glu	Arg	Leu	Gln	Asp	Phe	Asp	Lys	Ser	Asn	Pro	Ile	Val	650	655	660
Leu	Arg	Met	Met	Asn	Asp	Gln	Leu	Met	Phe	Leu	Glu	Arg	Ala	Phe	665	670	675
Ile	Asp	Pro	Leu	Gly	Leu	Pro	Asp	Arg	Pro	Phe	Tyr	Arg	His	Val	680	685	690
Ile	Tyr	Ala	Pro	Ser	Ser	His	Asn	Lys	Tyr	Ala	Gly	Glu	Ser	Phe	695	700	705
Pro	Gly	Ile	Tyr	Asp	Ala	Leu	Phe	Asp	Ile	Glu	Ser	Lys	Val	Asp	710	715	720
Pro	Ser	Lys	Ala	Trp	Gly	Glu	Val	Lys	Arg	Gln	Ile	Tyr	Val	Ala	725	730	735
Ala	Phe	Thr	Val	Gln	Ala	Ala	Ala	Glu	Thr	Leu	Ser	Glu	Val	Ala	740	745	750

<210> 519

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 619

agatgttaag gtgcaggtgt gccg 24

<210> 620

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 620

gaatatcagc gctccggta attcc 25

<210> 621

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 621

ccagcccttg aatggtaccg aggagagaag aagctcttca atggcc 46

<210> 622

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 622

ccaaactcac ccagtgagtg tgagc 25

<210> 623

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 623

ggggaaatca ggaatggtgt tctcc 25

<210> 624

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide probe

<400> 624

cttgttttca ccattgggct aactttgctg ctaggagttc aagccatgcc 50